Final
Weyerhaeuser Mill A Interim Cleanup Action No. 2 Completion Report

Weyerhaeuser Mill A Former
Everett, Washington
Facility Site No. 1884322
Cleanup Site No. 2146

Prepared for
Washington State Department of Ecology

Prepared on behalf of
Port of Everett

August 5, 2025

Prepared by
GeoEngineers, Inc.

2101 4th Avenue, Suite 950
Seattle, Washington 98121
206.728.2674

GeoEngineers

Weyerhaeuser Mill A Interim Cleanup Action No. 2 Completion Report

Weyerhaeuser Mill A Former Cleanup Site
Everett, Washington
Facility Site No. 1884322
Cleanup Site No. 2146

GeoEngineers File No. 0676-020-07
August 5, 2025

Prepared for:

Washington State Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Attention: Ryan Hardwick

Prepared on behalf of:

Port of Everett
P.O. Box 538
Everett, Washington 98206

Prepared by:

GeoEngineers, Inc.
2101 4th Avenue, Suite 950
Seattle, Washington 98121
206.728.2674

Robert S. Trahan, LG
Senior Environmental Scientist

John M. Herzog, PhD, LG
Senior Principal Geologist

RST:JMH:leh:ch

cc: Erik Gerking, Jacob Kirschner and Elise Gronewald
Port of Everett

Disclaimer: Any electronic form, facsimile, or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Table of Contents

1.0 Introduction 1
2.0 An Overview of Pre- and Post-Interim Action Stormwater System 1
2.1 Pre-Interim Action Stormwater System 1
2.2 Post-Interim Action Stormwater System 2
3.0 Applicable Regulatory Requirements for the Interim Action 3
3.1 Water Quality Permits 3
3.2 Washington State Environmental Policy Act 4
3.3 Archeological and Historical Preservation 4
3.4 City of Everett Substantive Requirements 4
4.0 Interim Action 4
4.1 Project Team 4
4.2 Interim Action Description 5
4.2.1 Interim Action Work Area A 5
4.2.2 Interim Action Work Area B 6
4.2.3 Interim Action Work Area C 7
4.2.4 Interim Action Work Area D 8
4.2.5 Interim Action Work Area E 9
4.3 Temporary Controls 10
4.3.1 Site Access, Security and Traffic Control 10
4.3.2 Temporary Erosion and Sediment Controls 10
4.3.3 Dust and Noise Control 11
4.4 Management of Excavated Material, Demolition Debris and Wastewater 11
4.4.1 Management of Demolition Debris 11
4.4.2 Management of Excavated Material 11
4.4.3 Management of Wastewater 12
4.5 Bioretention Stormwater Treatment 12
4.6 Backfill and Restoration 13
4.7 Compliance Monitoring 14
4.7.1 Protection Monitoring 14
4.7.2 Performance Monitoring 14
4.7.3 Confirmational Monitoring 16
5.0 Deviations from the Interim Action Work Plan and Field Adjustments 16
5.1 Abandonment of the Jack-and-Bore Trenchless Installation Method for the Middle Pump Station Force main Extension 16
5.2 Modifications to Bioretention Cell Size and Orientation 16
5.3 Discovery of Undocumented Abandoned Utilities 17
5.4 Bioretention Cell Distribution Pipe Adjustments 17
5.5 Mulch Replacement 17

6.0 Limitations..... 17
7.0 References..... 17

List of Tables

Table 1. Disposal Characterization Soil Sample Chemical Analytical Results
Table 2. Wastewater Chemical Analytical Results
Table 3. Import Material Chemical Analytical Results
Table 4. Pre- and Post-Interim Action Outfall 001 Stormwater Sample Chemical Analytical Results

List of Figures

Figure 1. Vicinity Map
Figure 2. Site Plan
Figure 3. Pre-Interim Action Stormwater System and Interim Action Work Areas
Figure 4. Post-Interim Action Stormwater System
Figure 5. Interim Action Work Area A
Figure 6. Interim Action Work Areas B, C and D
Figure 7. Interim Action Work Area E
Figures 8 through 15. Excavation Materials Encountered

Appendices

Appendix A. Permits and Substantive Requirements
Appendix B. Interim Action Record Drawings
Appendix C. Waste Characterization Sample Laboratory Reports
Appendix D. Landfill Disposal Weight Tickets
Appendix E. Wastewater Discharge Authorization and Laboratory Report
Appendix F. Import Material Laboratory Reports
Appendix G. Post-Construction Stormwater Laboratory Reports
Appendix H. Data Validation Report
Appendix I. Pre-Construction Stormwater Laboratory Reports

1.0 Introduction

This Interim Action Completion Report (IACR) documents the required cleanup actions completed by the Port of Everett (Port) during the Model Toxics Control Act (MTCA) interim cleanup action at the Weyerhaeuser Mill A Former Site (Site) located at 3500 Terminal Avenue, Everett, Snohomish County, Washington (Figure 1). The Site is currently listed in Washington State Department of Ecology's (Ecology's) database of confirmed and suspected contaminated sites under Facility/Site Number No. 1884322 and Cleanup Site ID No. 2146 and is subject to cleanup actions under Agreed Order Number DE8879. A site plan showing the overall Site and the Upland Area and Marine Area sub-units is shown in Figure 2. The requirements for the interim action are documented in a separate Agreed Order Number 22405, effective June 5, 2024.

As required by the Agreed Order, prior to performing the interim action, an Interim Action Work Plan (IAWP; GeoEngineers 2024) was prepared to describe the components of the interim action and serve as a basis for the design of the project. The IAWP was reviewed and approved by Ecology. The interim action was implemented by the Port in general accordance with the Ecology-approved IAWP.

The Ecology-selected cleanup for the Marine Area of the Site includes construction of a confined disposal facility (CDF) in an area that is located between South and Pacific Terminals. One of the outfalls (Outfall 003) discharged stormwater within the proposed CDF footprint. The interim action was implemented to decommission Outfall 003, reroute stormwater discharge from outfall 003 via new stormwater conveyance, and enhance existing stormwater treatment at the Site to allow for future construction of the CDF. An overview of the pre-interim action stormwater system at the Site including interim action work areas is shown in Figure 3. An overview of the post-interim action stormwater system at the Site is shown in Figure 4.

In general accordance with the requirements of IAWP, this IACR has been prepared to describe the interim action construction activities, present as-built conditions, laboratory reports for sampling and analysis work, waste disposal summaries, compliance monitoring results and other supporting documents associated with the interim action.

2.0 An Overview of Pre- and Post-Interim Action Stormwater System

The following sections present an overview of pre- and post-interim action stormwater system at the Site.

2.1 PRE-INTERIM ACTION STORMWATER SYSTEM

Prior to the construction of the interim action, stormwater in the Upland Area of the Site was collected and discharged to Port Gardner Bay through five outfalls (Outfall 001, 002, 003, 004 and 006).

- **Outfall 001**: The Outfall 001 drainage basin includes the south and central portions of the South Terminal upland areas. The vast majority of stormwater is collected through catch basins and conveyed via underground storm drainage pipes to one of two lift (pump) stations, the South and Middle Lift Stations, which pumps stormwater to a biofiltration swale bordering the Site to the east. This

stormwater receives treatment within the biofiltration swale and through a downstream baffle style oil-water separator prior to its discharge through Outfall 001.

- **Outfall 002**: The Outfall 002 drainage basin serves the southern half of the South Terminal Wharf. Stormwater is collected through trench drains and catch basins and conveyed via underground stormwater drainage pipes to a lift (pump) station, which pumps stormwater to a Modular Wetland Linear Biofiltration System for treatment prior to discharge through Outfall 002.
- **Outfall 003**: The Outfall 003 drainage basin serves the northern half of the South Terminal Wharf. Stormwater is collected through trench drains and a catch basin and conveyed via underground stormwater drainage pipes which delivers the stormwater to a baffle style oil-water separator for treatment prior to discharge through Outfall 003.
- **Outfall 004**: The Outfall 004 drainage basin includes the north portions of the South Terminal upland yard areas and portions of the Pacific Terminal upland yard areas. The majority of stormwater is collected through catch basins and conveyed via underground stormwater drainage pipes to one lift station (the North Lift Station), which pumps the stormwater to the biofiltration swale and a baffle style oil-water separator for treatment prior to its discharge through Outfall 004.
- **Outfall 006**: The Outfall 006 drainage basin includes the majority of Pacific Terminal upland areas, Pacific Terminal wharf, Pier 1 and portions of Hewitt Wharf. Stormwater is collected through catch basins and trench drains and conveyed via underground stormwater drainage pipes, which delivers the stormwater to a coalescing plate oil water separator for treatment before discharging through a check valve and co-mingling with a mixture of stormwater and wastewater from the City of Everett's Combined Sewer Overflow (CSO) PS07 before discharging through Outfall 006.

A detailed layout of the pre-interim action stormwater drainage networks within the South and Pacific Terminal areas is shown in Figure 3.

2.2 POST-INTERIM ACTION STORMWATER SYSTEM

As part of the interim action, the following changes were made to the stormwater system:

- Outfall 003 was plugged and decommissioned. The Outfall 001 drainage basin was expanded by installing new underground stormwater drainage pipes to connect storm drain network of the former Outfall 003 to Outfall 001; and
- Three bioretention treatment cells and above ground flow splitters were installed within the existing biofiltration swale at the discharge points of South, Middle and North Lift Stations, providing enhanced stormwater treatment to Outfall 001 and Outfall 004.

Following the completion of the interim action, the stormwater in the Upland Area of the Site is now being collected and discharged to Port Gardner Bay through four outfalls 001, 002, 004 and 006. A detailed layout of the post-interim action stormwater drainage networks within South and Pacific Terminals is shown in Figure 4. A description of interim action construction activities is provided in Section 4.0.

3.0 Applicable Regulatory Requirements for the Interim Action

Since the interim action was performed under an Agreed Order with Ecology, it was exempt from the procedural requirements of certain laws and local permits (Washington Administrative Code [WAC] 173-340-710[9][a]). However, the interim action complied with the substantive requirements of these laws and permits. The following sections summarize the applicable regulatory requirements.

3.1 WATER QUALITY PERMITS

At the time of this project, the Site held coverage under the 2020-2024 iteration of Industrial Stormwater General Permit (ISGP) No. WAR-001207 issued by Ecology under the regulatory authority of the State of Washington Water Pollution Control Law (Chapter 90.48 Revised Code of Washington [RCW]) and the federal Clean Water Act (Title 33 United States Code, Section 1251 et seq.). As a condition of ISGP, a Stormwater Pollution Prevention Plan (SWPPP) is maintained by the Port. The Port implements all known, available, and reasonable methods of prevention, control, and treatment (AKART) in general accordance with the requirements of the ISGP to ensure discharge from the Site does not cause or contribute to a violation of Water Quality Standards. In general accordance with the ISGP effective at the time of the project (2020-2024 ISGP), stormwater discharge at the Site was monitored for the following parameters:

- Visible oil sheen;
- Turbidity;
- pH;
- Copper (total); and
- Zinc (total).

Stormwater discharges were required to be in compliance with the benchmark values established for these parameters as per 2020-2024 ISGP. In addition to the sampling requirements applicable to the ISGP at the time of the project, the Marine Terminals facility, based on its proximity to 303(d) listed waterbodies and Puget Sound Sediment Cleanup sites (as defined in special condition 6 of the 2019 ISGP), and nature of operation as a Marine Cargo Handling facility (SIC 4491), was required to monitor for the following parameters and achieve compliance with the benchmark and effluent limit values established for these parameters:

- Petroleum hydrocarbons (diesel fraction); and
- Total suspended solids (TSS).

A Construction Stormwater General Permit (CSWGP) was not required for this project. An email communication was completed with Ecology's water quality group to evaluate the need for a CSWGP for the project on May 23, 2024 (Ecology 2024). In their correspondence, Ecology confirmed that CSWGP will not be required because the project will not result in discharges to the waters of the State. No discharge of construction wastewater (e.g., water accumulated in excavation and stockpile areas that require dewatering, water which contacted disturbed areas, and water used for decontamination) into waters of the State occurred during the interim action. Wastewater management and disposal activities completed during the interim action are described in Section 4.4.3.

3.2 WASHINGTON STATE ENVIRONMENTAL POLICY ACT

The Washington State Environmental Policy Act (SEPA) provides a way to identify possible environmental impacts that may result from governmental decisions. Information provided during the SEPA review process helps agency decision-makers, applicants, and the public understand how a project will affect the environment. SEPA is intended to ensure that state and local government officials consider environmental values when making decisions or taking official action. To meet this requirement, the Port (SEPA lead agency for the project) completed the SEPA checklist. The SEPA checklist was reviewed by Ecology and Ecology's review comments were addressed. Following Ecology's review, a public review period for the SEPA checklist was completed between May 7 to May 23, 2024. The Port served as the lead SEPA agency and concluded a Mitigated Determination of Non-Significance (MDNS) finding for the project. The final SEPA determination letter is included in Appendix A.

3.3 ARCHEOLOGICAL AND HISTORICAL PRESERVATION

Ecology completed an archeological and historical resource review and consultation with the Washington Department of Archaeology and Historic Preservation (DAHP) under Washington State Governor's Executive Order 21-02 (formerly 05-05) to avoid adverse impacts on archaeology and historic resources. A determination of moderate risk for encountering archeological resources during the interim action was made by Ecology on May 7, 2024. Ecology's cultural resources determination letter is included in Appendix A. To meet the requirement of the cultural resource determination letter, an Inadvertent Discovery Plan (IDP) was prepared as part of the IAWP. The requirements of the IDP were followed during construction. Additionally, the Port had an archeologist on-call when Site work was being performed to meet the requirements of the cultural resource determination letter. No potential archaeological resources, cultural resources, historical resources or human remains were encountered during the interim action construction activities.

3.4 CITY OF EVERETT SUBSTANTIVE REQUIREMENTS

The Port coordinated with the City of Everett (City) to ensure that their substantive permit requirements of the Public Works and Shoreline permits were met. Applicable project documentation prepared for interim action construction was submitted to the City for review, and coordination was completed with the City to ensure compliance with their substantive permit requirements. The City issued a letter dated July, 12 2024 (Appendix A) presenting their substantive permit requirements. The interim action activities were completed in general accordance with the City's substantive permit requirements.

4.0 Interim Action

4.1 PROJECT TEAM

The interim action construction was contracted and administered by the Port under regulatory oversight by Ecology. Key members of the project team are listed below:

AGENCY/COMPANY	PERSON AND PROJECT ROLE
Owner	
Port of Everett	Jacob Kirschner, Project Manager
	Elise Gronewald, Project Manager
	Erik Gerking, Chief of Planning and Development
	John Klekotka, Chief of Engineering and Construction
Regulatory Agency	
Department of Ecology	Ryan Hardwick, Site Manager
Port of Everett Consultants	
GeoEngineers, Inc. (Environmental Engineer)	John Herzog, LG, PhD, Principal
	Abhijit Joshi, PE, Project Manager/Engineer
	Nathan Solomon, Field Representative
KPFF (Civil Engineer)	Erik Nielsen, PE, Project Manager/Engineer
	Kelvin Kong, PE, Project Manager/Engineer
Herrera Inc. (Biotreatment Engineer)	Chris Webb, PE, Project Manager/Engineer
Construction General Contractor	
Bayshore Construction Company	Julie Eagan, Project Manager
	Zach Stroud, Project Manager
	Jeremiah Swihart, Superintendent
	Michael Casey, Foreman

4.2 INTERIM ACTION DESCRIPTION

The interim action involved decommissioning of Outfall 003, installation of new stormwater conveyance infrastructure to reroute Outfall 003 discharge, and construction of three bio-retention stormwater treatment cells within the existing footprint of the bioswale. In general accordance with the IAWP, interim action activities were completed in five areas identified as Areas A through E, as shown in Figure 3 and described in the following sub-sections. Record drawings were prepared by the Port to document as-built conditions of the interim action. Record drawings are included in Appendix B.

4.2.1 Interim Action Work Area A

Interim Action Work Area A (Area A) is located in the western portion of the Upland Area near Outfall 003 as shown in Figures 3 and 5. The primary activities completed at Area A are described below and shown in Figure 5.

- Utility locates were completed and temporary controls were implemented as described in Section 4.3;
- The existing pavement was sawcut/removed, and excavation was completed to depths ranging from approximately 3 to 12 feet within an area shown in Figure 5 to enable installation of stormwater conveyance elements;

- An existing catch basin and approximately 210 linear feet of existing 15-inch-diameter storm drain were removed;
- A temporary stormwater reroute was implemented and later removed;
- Asphalt and concrete debris generated were transported and disposed of as described in Section 4.4.1;
- Excavated soil was temporarily stockpiled on Site, characterized, transported and disposed of as described in Section 4.4.2;
- Construction wastewater was characterized and discharged in the City's sanitary sewer system as described in Section 4.4.3;
- Three undocumented and abandoned water lines ranging from 6-inch to 10-inch in diameter were uncovered during excavation at Area A. These utilities were confirmed to be abandoned and removed from the footprint of excavation. The exposed ends of these utilities at the limits of excavation were grouted/plugged prior to backfilling the excavation;
- A new upsized catch basin, approximately 125 linear feet of 18-inch-diameter storm drain, and approximately 205 linear feet of 36-inch-diameter storm drain were installed to convey stormwater from the northeastern portion of South Terminal Wharf that formerly discharged through Outfall 003 (decommissioned as part of this interim action) to Middle Lift Station, which discharges stormwater to the bioswale, and eventually discharges to surface waters at Outfall 001;
- The oil-water separator upstream of Outfall 003 was cored, allowing for the connection of the new 18-inch-diameter storm drain;
- Outfall 003 was plugged and decommissioned; and
- The excavation was backfilled using material imported from a Port-approved source that meets the Site preliminary cleanup screening levels, and the paved surfaces were restored as discussed in Section 4.6.

4.2.2 Interim Action Work Area B

Interim Action Work Area B (Area B) is located where the stormwater from the South Lift Station discharges into the existing biofiltration swale as shown on Figures 3 and 6. The primary activities completed at Area B are described below and shown in Figure 6.

- Utility locates were completed and temporary controls were implemented as described in Section 4.3;
- The existing pavement was sawcut/removed, existing ecology blocks were removed from within the swale, and excavation was completed to depths ranging from approximately 1 to 3.5 feet within Area B shown in Figure 6 to enable installation of stormwater conveyance elements and bioretention treatment cell;
- An existing 10-inch-diameter force main adjacent to Area B was abandoned in place, both ends capped with grout;
- The asphalt and concrete debris generated were transported and disposed of as described in Section 4.4.1;
- Excavated soil was temporarily stockpiled on Site, characterized, transported and disposed of as described in Section 4.4.2;

- Construction wastewater was characterized and discharged in the City's sanitary sewer system as described in Section 4.4.3;
- A temporary stormwater reroute was provided to collect and discharge incoming stormwater from the South Lift Station and from the upgradient portion of existing biofiltration swale either into the existing biofiltration swale downgradient of Area B or into the adjacent Burlington Northern Sante Fe (BNSF) bypass swale within Port property such that Area B did not receive discharge from the South Lift Station during construction;
- Approximately 1,400 square feet bioretention treatment cell was installed within the existing biofiltration swale to enhance existing treatment of stormwater coming from South Lift Station as described in Section 4.5;
- An 18-inch-diameter culvert was installed below the bioretention treatment cell to allow treated stormwater from upgradient portion of existing biofiltration swale to bypass the bioretention treatment cell installed at Area B;
- An above ground flow control structure was installed upgradient of the bioretention treatment cell to ensure that the stormwater flow into the treatment cell does not exceed the design capacity (water quality design flowrate);
- Approximately 30 linear feet of 10-inch-diameter force main was installed to connect the existing force main to the flow control structure and convey stormwater from the South Lift Station to the bioretention treatment cell; and
- The excavation was backfilled using material imported from a Port-approved source that meets the Site preliminary cleanup screening levels, and the paved surfaces were restored as discussed in Section 4.6.

4.2.3 Interim Action Work Area C

Interim Action Work Area C (Area C) is located between the Middle Lift Station and the existing biofiltration swale shown on Figures 3 and 6. The primary activities completed at Area C are described below and shown in Figure 6.

- Utility locates were completed and temporary controls were implemented as described in Section 4.3;
- The existing pavement was sawcut/removed, and excavation was completed to depths of up to 13 feet within the bore pit area, and up to 5 feet to allow for slip-lining of existing storm drain;
- Due to unforeseen subsurface conditions which consisted of wood debris and reinforced concrete structures, the jack-and-bore subcontractor determined that jack-and-bore was not a viable trenchless installation method for this segment of new piping;
- The design plans for installing a new storm drain using trenchless jack-and-bore pipe installation methods were abandoned and instead approximately 75 linear feet of existing 10-inch-diameter force main located between Areas C and D, which was originally planned to be abandoned, was slip-lined to ensure it is capable to convey stormwater from Middle Lift Station to Area D;
- The asphalt and concrete debris generated were transported and disposed of as described in Section 4.4.1;

- Excavated soil was temporarily stockpiled on Site, characterized, transported and disposed of as described in Section 4.4.2;
- Construction wastewater was characterized and discharged in the City's sanitary sewer system as described in Section 4.4.3; and
- The excavation was backfilled using material imported from a Port-approved source that meets the Site preliminary cleanup screening levels, and the paved surfaces were restored as discussed in Section 4.6.

4.2.4 Interim Action Work Area D

Interim Action Work Area D (Area D) is located where the stormwater from the Middle Lift Station discharges into the existing biofiltration swale as shown on Figures 3 and 6. The primary activities completed at Area D are described below and shown in Figure 6.

- Utility locates were completed and temporary controls were implemented as described in Section 4.3;
- The existing pavement was sawcut/removed, existing ecology blocks within the bioswale were removed, and excavation was completed to depths ranging from approximately 1 to 3.5 feet within an area shown in Figure 6 to enable installation of stormwater conveyance elements and the bioretention treatment cell.
- Asphalt and concrete debris generated were transported and disposed of as described in Section 4.4.1;
- Excavated soil was temporarily stockpiled on Site, characterized, transported and disposed of as described in Section 4.4.2;
- Construction wastewater was characterized and discharged in the City's sanitary sewer system as described in Section 4.4.3;
- A temporary stormwater reroute was provided to collect and discharge incoming stormwater from the Middle Lift Station and from upgradient portion of existing biofiltration swale either into the existing biofiltration swale downgradient of Area D or into the BNSF bypass swale immediately east of the construction such that Area D did not receive stormwater discharge from the Middle Lift Station during construction;
- Approximately 55 liner feet of existing 10-inch-diameter force main located north of Area D was replaced;
- Approximately 2,000 square feet bioretention treatment cell was installed within the biofiltration swale to enhance treatment of stormwater coming from Middle Lift Station as described in Section 4.5;
- An 18-inch diameter culvert was installed below bioretention treatment cell to allow treated stormwater from upgradient portion of biofiltration swale to bypass the bioretention treatment cell installed at Area D;
- An above ground flow control structure was installed upgradient of the bioretention treatment cell to ensure that the stormwater flow into the treatment cell does not exceed design capacity;
- An existing 10-inch-diameter force main located between Areas C and D was slip lined and connected to the flow control structure at Area D to convey stormwater from the Middle Lift Station to the bioretention treatment cell; and

- The excavation was backfilled using material imported from a Port-approved source that meets the Site preliminary cleanup screening levels, and the paved surfaces were restored as discussed in Section 4.6.

4.2.5 Interim Action Work Area E

Interim Action Work Area E (Area E) was located where the stormwater from the North Lift Station discharges into the existing biofiltration swale as shown on Figures 3 and 7. The primary activities completed at Area E are described below and shown in Figure 7.

- Utility locates were completed and temporary controls were implemented as described in Section 4.3;
- The existing pavement was sawcut/removed and excavation to depths ranging from approximately 1 to 3 feet was completed within an area shown in Figure 7 to enable installation of stormwater conveyance elements and bioretention treatment cell;
- Approximately 15 linear feet of the existing 10-inch-diameter force main was removed;
- Asphalt and concrete debris generated were transported and disposed of as described in Section 4.4.1;
- Excavated soil was temporarily stockpiled on Site, characterized, transported and disposed of as described in Section 4.4.2;
- Construction wastewater was characterized and discharged in the City's sanitary sewer system as described in Section 4.4.3;
- A temporary stormwater reroute was provided to collect and discharge incoming stormwater from North Lift Station and from the upgradient portion of existing biofiltration swale into the existing biofiltration swale downgradient of Area E such that Area E did not receive stormwater discharge from the North Lift Station during construction;
- Approximately 1,650 square feet bioretention treatment cell was installed within the existing biofiltration swale to enhance treatment of stormwater coming from North Lift Station as described in Section 4.5;
- An 18-inch-diameter culvert was installed below bioretention treatment cell to allow treated stormwater from upgradient portion of existing biofiltration swale to bypass the bioretention treatment cell installed at Area E;
- An above ground flow control structure was installed upgradient of the bioretention treatment cell to ensure that stormwater flow into the treatment cell does not exceed the design capacity;
- Approximately 15 linear feet of 10-inch diameter force main was installed to connect existing force main to the flow control structure and convey the stormwater from North Lift Station to the bioretention treatment cell; and
- The excavation was backfilled using material imported from a Port-approved source that meets the Site preliminary cleanup screening levels, and the paved surfaces were restored as discussed in Section 4.6.

4.3 TEMPORARY CONTROLS

4.3.1 Site Access, Security and Traffic Control

Access to the interim action areas was through a gated entry of Port's terminal facility located on Terminal Avenue. Transportation Security Administration's (TSA's) Transportation Worker Identification Credential (TWIC) card is required to enter the gate. Construction workers were required to have a TWIC card or be escorted by authorized personnel.

In general accordance with the requirements of IAWP and project plans and specifications, the contractor installed a temporary security fence to cordon off the work areas and prevent unauthorized entry. Appropriate gate(s) were provided alongside the temporary fence to ensure that the security standards for the Port facility are met while providing access to construction personnel. The contractor coordinated work hours and construction activities with the Port's ongoing terminal operations to minimize workflow disruptions during interim action activities.

A portion of the interim action work was located adjacent to the Pigeon Creek Trail that runs parallel to Port's terminal facility to the east and provides access to a Public Beach located in the southern portion of the Site. To facilitate interim action construction work, Pigeon Creek Trail was closed to the public for the duration of construction. Appropriate signage and advanced notifications were provided to make the public aware of trail closures. Following the completion of construction activities, the trail was re-opened for public use.

The contractor installed necessary traffic controls including signs and barricades to maintain the safe movement of vehicles and personnel around interim action work areas.

4.3.2 Temporary Erosion and Sediment Controls

Best management practices (BMPs) consistent with Ecology's current Stormwater Management Manual for Western Washington (SWMMWW) were used for erosion and sediment control during construction. The BMPs implemented during the interim action construction included:

- Silt fences and straw wattles were installed to prevent sediment, debris and sediment-laden water from leaving the work area, and to prevent stormwater run-on from entering the work area.
- Catch basin inlet protection was installed to prevent or minimize sediment and debris from entering the catch basin.
- Street sweeping and cleaning was implemented, as necessary, to remove soil tracked outside of the work area limits.
- Implementation of stockpile BMPs in general accordance with the requirements of the IAWP.
- Wastewater collection and management (described in Section 4.4.3).

Temporary erosion and sediment control measures were maintained throughout the duration of the project and inspected by the general contractor and the Port's field representative on a regular basis to ensure their effectiveness.

4.3.3 Dust and Noise Control

Engineering controls were used during construction (e.g., wetting or covering exposed soil), as necessary, to minimize off-site transport of airborne particulates. When wetting was employed, care was taken to apply the minimum amount of water to prevent dust while avoiding the creation of mud.

To minimize potential noise impacts, the construction work was performed during hours allowed by the City of Everett municipal code.

4.4 MANAGEMENT OF EXCAVATED MATERIAL, DEMOLITION DEBRIS AND WASTEWATER

Examples of the materials that were encountered in the various excavations are shown in Figures 8 through 15.

4.4.1 Management of Demolition Debris

Demolition debris including removed concrete or asphalt pavement were managed separately from excavated material and were transported offsite to a permitted recycling facilities (Reece Aggregates and Recycling in Arlington, Washington and Granite Construction Company Smith Island Plant located in Everett, Washington). The contractor completed coordination and obtained authorization from the recycling facility prior to transport and disposal. Transport and disposal of the demolition debris was completed in general accordance with the applicable laws and regulations.

4.4.2 Management of Excavated Material

Excavated material was temporarily stockpiled on Site for waste characterization purposes. Stockpile BMPs (GeoEngineers 2024) were followed in general accordance with the IAWP. Excavated material was tested prior to transport and disposal at a permitted disposal facility. Soil sampling and analysis was completed from stockpiles to adequately characterize the excavated material for disposal.

A total of 1,675.79 tons (approximately 1,120 cubic yards) of soil excavated from the interim action areas was temporarily stockpiled on Site and subsequently disposed of at an appropriate disposal facility. Stockpile sampling and analysis was completed in general accordance with the requirements of IAWP and the requirements of the landfill. The number of soil samples collected for stockpile characterization was determined in general accordance with Ecology's guidance on the typical number of samples needed to adequately characterize stockpiled soil (Ecology 2016). Twelve stockpile samples SP-1-A through SP-1-L were collected for waste characterization purposes and submitted to Analytical Resources LLC in Tukwila, Washington (an Ecology-accredited laboratory) for chemical analysis.

The stockpile samples were analyzed for the following site COCs in general accordance with IAWP:

- Metals;
- Petroleum hydrocarbons;
- Volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene and xylenes (BTEX);
- Semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs);
- Polychlorinated biphenyls (PCBs); and

- Dioxins and furans.

The chemical analytical results for stockpile characterization soil samples are presented in Table 1. The laboratory reports containing chemical analytical data for stockpile samples are included in Appendix C.

A completed landfill profile form and laboratory reports containing stockpile samples were submitted to the contractor selected landfill (Republic Services Roosevelt Regional Landfill, a Resource Conservation and Recovery Act [RCRA] Subtitle D landfill) to obtain disposal authorization. A landfill disposal authorization was obtained prior to transport and disposal of the excavated material. Transport and disposal of the excavated material was completed in general accordance with the applicable laws and regulations. Weight tickets issued by Republic Services are included in Appendix D.

4.4.3 Management of Wastewater

Wastewater, including water accumulated in excavation and stockpile areas, water which came in contact with disturbed surfaces, and water used for decontamination, was managed in general accordance with the IAWP and applicable laws and regulations. In addition to implementing Temporary Erosion and Sediment Controls (TESC) BMPs (Section 4.3.2), the contractor performed construction activities including excavation in a manner that minimized the generation of wastewater to the extent practicable.

The contractor completed coordination with the City and obtained a wastewater discharge permit (permit number DAC2408-002) to discharge to the City's sanitary sewer system. The wastewater was collected and stored in temporary on-Site storage tanks, and sampling and analysis was completed prior to discharge of wastewater into City's sanitary sewer. A wastewater sample was submitted to ALS Environmental located in Everett, Washington (an Ecology-accredited laboratory) for analyses of the following parameters in general accordance with the City's discharge permit:

- Metals;
- Cyanide; and
- Fats, Oils and Grease (FOG).

The chemical analytical results were submitted to the City and based on the results; the City approved discharge of wastewater into City's sanitary sewer system. A total of 9,865 gallons of wastewater generated during the interim action was discharged into City's sanitary sewer system.

The chemical analytical results for wastewater sample are presented in Table 2. The City discharge permit and the wastewater sample laboratory report are included in Appendix E.

4.5 BIORETENTION STORMWATER TREATMENT

Bioretention stormwater treatment was constructed in general accordance with Ecology's guidelines for enhanced treatment facilities (Ecology 2019). As discussed in Section 4.2, bioretention treatment cells were incorporated within the footprints of the existing biofiltration swale at the discharge locations of the South, Middle and North Lift Stations to enhance the treatment of stormwater.

The bioretention treatment cells were constructed using High Performance Bioretention Soil Media (HPBSM) which consists of the following layers of media placed in a sequential order with compost/mulch on the top and underdrain in the bottom:

- Approximately 3-inch-thick layer of compost/mulch;
- Approximately 18-inch-thick layer of High Performance Bioretention Soil Mix; and
- Approximately 6- to 12-inches-thick underdrain media.

These layers were fully contained within a 4- to 5-foot-high ecology block wall on all sides. The four walls and base of the treatment cells were lined with impermeable liner. Bioretention treatment cells were equipped with a flow control structure that delivers stormwater to the surface of the treatment cell and the stormwater passes through the layers of compost/mulch and HPBSM media under gravity to receive treatment. The treated stormwater is then collected within the underdrain media from where it is conveyed downstream using a slotted underdrain, installed within the underdrain media. The bioretention treatment cells were designed in general accordance with the SWMMWW, Section III-2.6. The flow control structure will ensure that the flow of stormwater into the treatment cells does not exceed the design capacity (water quality design flow rate). The flow control structures have built-in bypass which will discharge stormwater flows that exceed the water quality design flow rate into the existing swale. The treatment cells were also equipped to provide emergency overflow into the existing swale in the event the media within the biotreatment cells becomes clogged – indicating maintenance on the system may be required.

Minor modification to the dimensions and orientation of the bioretention cells were completed in the field after the excavation within the bioswale revealed an undocumented electrical duct bank which ran the entire length of the swale and conflicted with the placement of the western alignments of the bioretention treatment cell walls. This unforeseen utility prevented the walls from being constructed as originally designed and necessitated a slight redesign to avoid the utility while preserving the hydrologic and hydraulic functions of the bioretention cells to ensure proper treatment. The as-built locations of bioretention treatment cells are shown in Figures 6 and 7.

4.6 BACKFILL AND RESTORATION

Restoration activities were completed to backfill the excavation and restore site surfaces. Backfilling of excavations was completed using an imported fill material from Mountain Loop Mine located in Granite Falls, Washington or CalPortland located in Kenmore, Washinton. A samples representative of each of the two fill material sources identified was collected and submitted to ALS Environmental (an Ecology-accredited laboratory) located in Everett, Washington for chemical analysis.

The samples were analyzed for the following site COCs in general accordance with IAWP:

- Metals;
- Petroleum hydrocarbons;
- VOCs including BTEX;
- SVOCs including PAHs;
- PCBs; and

- Dioxins and furans.

The chemical analytical results were less than the import material criteria, which were established based on the cleanup screening level of the Site's Upland Area, and the import material from both material sources were determined to be acceptable for use at the Site for backfilling purposes. The import material chemical analytical results and import material criteria are presented in Table 3, and laboratory reports containing chemical analytical data for the import material samples are included in Appendix F.

A total of 711.01 tons of material was imported to backfill the Site excavations. Following backfilling and preparation of the subgrade, paved asphalt and concrete surfaces were restored in kind.

4.7 COMPLIANCE MONITORING

In general accordance with WAC 173-340-410, there are three types of compliance monitoring: protection, performance, and confirmation monitoring, as described in the following sections.

4.7.1 Protection Monitoring

In general accordance with WAC 173-340-410, protection monitoring is completed to "*confirm that human health and the environment are adequately protected during construction and the operation and maintenance period of an interim action or cleanup action as described in the health and safety plan.*"

Protection monitoring activities completed as part of the interim action are described in the following sections.

4.7.1.1 HEALTH AND SAFETY

The interim action activities were performed in general accordance with the requirements of the Washington Industrial Safety and Health Act ([WISHA]; RCW 49.17) and the Federal Occupational Safety and Health Act ([OSHA]; 29 CFR 1910, 1926). These regulations include requirements that workers be protected from exposure to contaminants. A site-specific Health and Safety Plan (HASP) was followed for the protection monitoring requirement for GeoEngineers' personnel. Other contractors working on the Site prepared a separate HASP for their use.

Personnel engaged in work that involved contaminated material excavation and handling generally complied with the provisions of WAC 173-340-810 (MTCA Cleanup Regulation, Worker Safety and Health) and were Hazardous Waste Operations and Emergency Response (HAZWOPER), OSHA, and WISHA certified.

4.7.1.2 ENVIRONMENTAL PROTECTION

Environmental protection measures consisting of BMPs for stormwater, sediment, drainage, and erosion control; dust and noise control; spill prevention and pollution control; and other controls needed to protect environmental quality were implemented, as necessary. The environmental protection measures including traffic controls, TESC, dust and noise controls that were implemented are described in Section 4.3.

4.7.2 Performance Monitoring

In general accordance with WAC 173-340-410, performance monitoring is completed to "*confirm that the interim action or cleanup action has attained cleanup standards and, if appropriate, remediation levels or other performance standards such as construction quality control measurements or monitoring necessary*

to demonstrate compliance with a permit or, where a permit exemption applies, the substantive requirements of other laws."

As a result of the interim action, the stormwater that was formerly discharged through Outfall 003 was rerouted and is now discharged through Outfall 001. As discussed in Section 3.1, outfall discharges at the Site are regulated under ISGP No. WAR001207 that the Port maintains with Ecology. To comply with the requirements of the ISGP, the Port performs periodic sampling and analysis of stormwater discharge through existing outfalls located at the Site. The ISGP effective at the time of this project (2020-2024 ISGP) required monitoring of the following parameters on a quarterly basis for stormwater discharges at the monitoring point for Outfall 001:

- Visible oil sheen;
- Turbidity;
- pH;
- TSS;
- Copper (total);
- Zinc (total); and
- Petroleum hydrocarbons (diesel fraction).

Performance monitoring included completing one stormwater sampling event to collect a sample representative of stormwater that is being discharged from Outfall 001 following completion of the interim action and analyzing the sample for the parameters mentioned above. In general accordance with the IAWP, sampling activities were completed on February 25, 2025, following the completion of interim action construction and following a storm event to allow for a collection of a representative stormwater sample.

During sample collection, visual observations were made for oil sheen. Turbidity and pH measurements were made using a field meter. Chemical analysis of TSS, total copper, total zinc and diesel was performed at ALS Environmental (an Ecology-accredited laboratory) located in Everett, Washington.

The sample results were compared to the benchmark values established for the parameters in the ISGP effective at the time of the project (2020-2024 ISGP). The sample results and benchmark value for each parameter are presented in Table 1. The results were less than the benchmark values. Therefore, in general accordance with the IAWP, additional monitoring events for the purposes of the interim action will not be performed as part of performance monitoring. The field data measurement sheet and laboratory report for the post-interim action stormwater performance monitoring sample collected from Outfall 001 are presented in Appendix G. The laboratory data was validated for quality and usability. Based on data validation, the laboratory data was determined to be of acceptable quality for its intended use. The Data Validation Report is included in Appendix H. The results of the stormwater sample were reported to Ecology's Environmental Information Management (EIM) database.

The performance monitoring requirements detailed above do not alter the periodic monitoring of outfall discharges that Port completes to meet the requirements of ISGP. The Port will continue to monitor stormwater discharges as required under the current ISGP.

As per the requirements of the IAWP, the field data measurement sheet and laboratory report for a pre-interim action stormwater sample collected from Outfall 001 by the Port as part of ISGP in September 2024 are presented in Appendix I. This information is provided to document pre-interim action stormwater quality at Outfall 001. The results of the pre-interim action stormwater sample are also summarized in Table 1.

4.7.3 Confirmational Monitoring

In general accordance with WAC 173-340-410, confirmational monitoring is completed to "*confirm the long-term effectiveness of the interim action or cleanup action once cleanup standards and, if appropriate, remediation levels or other performance standards have been attained.*"

No confirmational monitoring was identified in the IAWP. Further monitoring requirements at the Site will be established following completion of the Upland Area and Marine Area cleanup actions.

5.0 Deviations from the Interim Action Work Plan and Field Adjustments

Deviations from the Interim Action Work Plan or adjustments made in the field during construction include the following.

5.1 ABANDONMENT OF THE JACK-AND-BORE TRENCHLESS INSTALLATION METHOD FOR THE MIDDLE PUMP STATION FORCE MAIN EXTENSION

The jack-and-bore method was initially identified as the preferred trenchless installation approach for extending the middle pump station force main beneath the rail lines. However, excavation of the launch and receiving pits revealed significant unforeseen subsurface obstructions, including reinforced concrete (likely remnants of a former building foundation) and extensive wood debris. Attempts to dig deeper in search of more suitable soils for trenchless installation were unsuccessful. Following an on-site evaluation, the jack-and-bore subcontractor determined the probability of successful installation was low due to the encountered obstacles.

Slip lining was identified as a feasible alternative, utilizing an existing segment of the force main located beneath the rail.

This change required several unanticipated work items: (1) additional excavation to locate clean soils and associated shoring, (2) backfilling of the now deeper initial launch pit and receiving pit, (3) new excavations to expose the existing force main on either side of the rail crossing, and (4) revisions to the stormwater bypass system to accommodate the modified construction approach.

5.2 MODIFICATIONS TO BIORETENTION CELL SIZE AND ORIENTATION

During excavation of the bioswale, the contractor uncovered an undocumented duct bank along the western edge of the swale. The location of the duct bank structure conflicted with the planned location of the bioretention cell walls and necessitated redesigning of the impacted cells. The updated configuration resulted in narrower and longer cells, which also caused modification to the design and installation of materials such as the impermeable liner.

In the northern bioretention cell area, a short lagging wall with steel soldier piles encased in concrete was encountered. To avoid further redesigns, the Port directed the contractor to chip and torch-cut the beams to enable construction of the eastern ecology block wall as originally planned.

5.3 DISCOVERY OF UNDOCUMENTED ABANDONED UTILITIES

Several undocumented utilities were encountered during excavation in the South Terminal yard. These utilities were confirmed to be abandoned and were removed and properly decommissioned.

5.4 BIORETENTION CELL DISTRIBUTION PIPE ADJUSTMENTS

After the first major storm event, the Port observed that the distribution pipes had floated and settled unevenly within the bioretention cells. To address this, the engineer directed that kerf cuts be made in the corrugated distribution pipes. These cuts allowed the corrugations to fill with water, reducing buoyancy.

5.5 MULCH REPLACEMENT

After the first major storm event overtopping at one of the bioretention cells was observed, indicating potential for inadequate drainage. The Port identified that the mulch used in the bioretention cell did not meet the project specifications and contained excessive fines, which prevented proper infiltration. The contractor removed this mulch and replaced it with material that met the required standards.

6.0 Limitations

This report has been prepared for the exclusive use of the Port of Everett, their authorized agents and regulatory agencies in their evaluation of the interim action at the Weyerhaeuser Mill A Former Site. No other party may rely on the product of our services unless we agree in advance and in writing to such reliance.

Within the limitations of scope, schedule and budget, our services were executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

7.0 References

GeoEngineers Inc. (GeoEngineers), 2024a. Remedial Investigation/Feasibility Study Report – Marine Area, Weyerhaeuser Mill A Former, Everett, Washington. September 13, 2024.

GeoEngineers Inc. (GeoEngineers), 2024b. Interim Action Work Plan, Weyerhaeuser Mill A Former, Everett, Washington. June 2024.

Washington State Department of Ecology (Ecology), 2016. Guidance for Remediation of Petroleum Contaminated Sites, Toxics Cleanup Program, Publication No. 10-09-057, June 2016.

Washington State Department of Ecology (Ecology), 2019. Stormwater Management Manual for Western Washington. Publication No. 19-10-021. Prepared by the Washington State Department of Ecology, Olympia, Washington. 2019.

Washington State Department of Ecology (Ecology), 2024a. "Marine Area Cleanup Action Plan, Weyerhaeuser Mill A Former, Everett, Washington." November 2024.

Washington State Department of Ecology (Ecology), 2024b. Email from Charles Hackel, Construction Stormwater Inspector, Washington State Department of Ecology, Water Quality Program to Jacob Kirschner, Environmental Project Manager, Port of Everett, dated May 23, 2024.

Tables

Table 1

Disposal Characterization Soil Sample Chemical Analytical Results

Weyerhaeuser Mill A Former

Everett, Washington

Analyte	CAS No.	Analytical Method	Sample ID: SP-1-A Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-B Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-C Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-D Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-E Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-F Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-G Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-H Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-I Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-J Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-K Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-L Sample Date: 11/4/2024	Qualifier
Metals (mg/kg)																										
Antimony	7440-36-0	EPA6020	0.21 U		0.26 U		0.3 U		0.21 U		0.22 U		0.2 U		0.21 U		0.2 U		0.22 U		0.2 U		0.22 U		0.22 U	
Arsenic	7440-38-2	SW6020B	**6.23**		**6.05**		**6.57**		**5.52**		**7.00**		**3.09**		**4.92**		**3.93**		**3.07**		**2.96**		**3.53**		**2.56**	
Barium	7440-39-3	SW6020B	**34.8**		**35.8**		**70.8**		**29.2**		**69.7**		**40.5**		**42.9**		**35.3**		**30.2**		**26.3**		**27.1**		**14.1**	
Beryllium	7440-41-7	EPA6020	**0.17 J**		**0.20 J**		**0.25 J**		**0.18 J**		**0.19 J**		**0.15 J**		**0.24**		**0.16 J**		**0.15 J**		**0.12 J**		**0.14 J**		**0.10 J**	
Cadmium	7440-43-9	SW6020B	**0.11**		**0.07 J**		**0.11 J**		**0.06 J**		**0.15**		**0.08 J**		**0.06 J**		**0.06 J**		**0.21**		**0.08 J**		**0.07 J**		**0.09 J**	
Chromium	7440-47-3	SW6020B	**18.2**		**24.0**		**36.4**		**23.9**		**21.6**		**21.3**		**25.9**		**23.6**		**27.6**		**15.7**		**23.3**		**18.0**	
Copper	7440-50-8	SW6020B	**23.8**		**25.5**		**34.2**		**18.5**		**29.2**		**12.1**		**16.0**		**12.0**		**9.28**		**11.4**		**11.2**		**9.87**	
Lead	7439-92-1	SW6020B	**5.51**		**5.87**		**9.42**		**3.92**		**22.4**		**4.65**		**4.26**		**9.52**		**3.55**		**7.50**		**3.71**		**3.31**	
Mercury	7439-97-6	SW7471B	**0.0263**		**0.0327**		**0.0371**		**0.0107 J**		**0.0728**		**0.0224**		**0.0225 J**		**0.0276**		**0.0104 J**		**0.00776 J**		**0.0205 J**		**0.0134 J**	
Nickel	7440-02-0	SW6020B	**30.4**		**31.0**		**43.8**		**24.4**		**32.0**		**27.0**		**34.4**		**30.6**		**25.7**		**23.3**		**27.2**		**27.7**	
Selenium	7782-49-2	SW6020B	**0.45 J**		**0.41 J**		**0.50 J**		**0.45 J**		**0.45 J**		**0.64**		**0.60**		**0.48 J**		**0.44 J**		**0.41 J**		**0.41 J**		**0.26 J**	
Silver	7440-22-4	SW6020B	**0.05 J**		**0.06 J**		**0.08 J**		**0.05 J**		**0.06 J**		**0.03 J**		**0.03 J**		**0.03 J**		0.22 U		**0.03 J**		0.22 U		0.22 U	
Thallium	7440-28-0	EPA6020	**0.04 J**		**0.05 J**		**0.07 J**		**0.04 J**		**0.05 J**		**0.03 J**		**0.03 J**		**0.03 J**		**0.03 J**		**0.03 J**		**0.03 J**		0.22 U	
Zinc	7440-66-6	EPA6020	**50.7**		**50.5**		**67.5**		**43.5**		**78.9**		**34.6**		**41.7**		**35.2**		**31.8**		**33.2**		**32.6**		**23.1**	
Petroleum Hydrocarbons (mg/kg)																										
Gasoline-Range	n/a	NWTPH-GX	5.92 U		7.19 U		8.1 U		6.12 U		6.62 U		**9.5**		**14.5**		5.77 U		7.07 U		8.62 U		5.69 U		6.64 U	
Diesel-Range	68334-30-5	NWTPH-DX	**53.4**		**64.4**		**59.4**		**13.3**		**55.6**		**221**		**49.0**		**52.9**		**65.1**		**30.8**		**40.0**		**76.0**	
Heavy Oil-Range	n/a	NWTPH-DX	**264**		**372**		**250**		**67.6**		**258**		**177**		**132**		**98.6**		**143**		**75.4**		**93.9**		**170**	
Benzene	71-43-2	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
Ethylbenzene	100-41-4	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
Toluene	108-88-3	SW8260D	**0.00056 J**		**0.00066 J**		**0.00070 J**		0.00115 U		**0.00116**		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
Xylene, m-,p-	179601-23-1	SW8260D	0.00225 U		0.00231 U		0.00241 U		0.0023 U		0.00217 U		0.00202 U		0.00242 U		0.00265 U		0.00233 U		0.0024 U		0.00191 U		0.0021 U	
Xylene, o-	95-47-6	SW8260D	**0.00105 J**		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
Total Xylenes	1330-20-7	SW8260D	**0.00198 J**		0.00231 U		0.00241 U		0.0023 U		0.00217 U		0.00202 U		0.00242 U		0.00265 U		0.00233 U		0.0024 U		0.00191 U		0.0021 U	
Volatile Organic Compounds (VOCs; mg/kg)																										
1,1,1,2-Tetrachloroethane	630-20-6	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,1,1-Trichloroethane	71-55-6	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,1,2,2-Tetrachloroethane	79-34-5	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	76-13-1	SW8260D	0.00225 U		0.00231 U		0.00241 U		0.0023 U		0.00217 U		0.00202 U		0.00242 U		0.00265 U		0.00233 U		0.0024 U		0.00191 U		0.0021 U	
1,1,2-Trichloroethane	79-00-5	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,1-Dichloroethane	75-34-3	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,1-Dichloroethylene	75-35-4	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,1-Dichloropropene	563-58-6	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,2,3-Trichlorobenzene	87-61-6	SW8260D	0.00562 U		0.00577 U		0.00603 U		0.00574 U		0.00543 U		0.00505 U		0.00606 U		0.00662 U		0.00583 U		0.00599 U		0.00478 U		0.00525 U	
1,2,3-Trichloropropane	96-18-4	SW8260D	0.00225 U		0.00231 U		0.00241 U		0.0023 U		0.00217 U		0.00202 U		0.00242 U		0.00265 U		0.00233 U		0.0024 U		0.00191 U		0.0021 U	
1,2,4-Trichlorobenzene	120-82-1	SW8260D	0.00562 U		0.00577 U		0.00603 U		0.00574 U		0.00543 U		0.00505 U		0.00606 U		0.00662 U		0.00583 U		0.00599 U		0.00478 U		0.00525 U	
1,2,4-Trimethylbenzene	95-63-6	SW8260D	0.00112 U		**0.00078 J**		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,2-Dibromo-3-Chloropropane	96-12-8	SW8260D	0.00562 U		0.00577 U		0.00603 U		0.00574 U		0.00543 U		0.00505 U		0.00606 U		0.00662 U		0.00583 U		0.00599 U		0.00478 U		0.00525 U	
1,2-Dibromoethane	106-93-4	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,2-Dichlorobenzene	95-50-1	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,2-Dichloroethane	107-06-2	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,2-Dichloropropane	78-87-5	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	
1,3,5-Trimethylbenzene	108-67-8	SW8260D	0.00112 U		0.00115 U		0.00121 U		0.00115 U		0.00109 U		0.00101 U		0.00121 U		0.00132 U		0.00117 U		0.0012 U		0.00096 U		0.00105 U	

Analyte	CAS No.	Analytical Method	Sample ID: SP-1-A Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-B Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-C Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-D Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-E Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-F Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-G Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-H Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-I Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-J Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-K Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-L Sample Date: 11/4/2024	Qualifier
1,3-Dichlorobenzene	541-73-1	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
1,3-Dichloropropane	142-28-9	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
1,4-Dichlorobenzene	106-46-7	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
2,2-Dichloropropane	594-20-7	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
2-Chloroethyl vinyl ether	110-75-8	SW8260D	0.00562	U	0.00577	U	0.00603	U	0.00574	U	0.00543	U	0.00505	U	0.00606	U	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
2-Chlorotoluene	95-49-8	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
2-Hexanone	591-78-6	SW8260D	0.00562	U	0.00577	U	0.00603	U	0.00574	U	0.00543	U	0.00505	U	0.00606	U	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
4-Chlorotoluene	106-43-4	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
4-Isopropyltoluene	99-87-6	SW8260D	0.00112	U	**0.00121**		**0.00189**		0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	**0.00078**	**J**	**0.00098**	**J**	0.00096	U	0.00105	U
Acetone	67-64-1	SW8260D	**0.0758**		**0.0882**		**0.153**		**0.0622**		**0.0962**		**0.0415**		**0.0542**		**0.0873**		**0.0470**		**0.0459**		**0.0405**		**0.0401**	
Acrolein	107-02-8	SW8260D	0.00562	U	0.00577	U	0.00603	U	0.00574	U	0.00543	U	0.00505	U	**0.00410**	**J**	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
Acrylonitrile	107-13-1	SW8260D	0.00562	U	0.00577	U	0.00603	U	0.00574	U	0.00543	U	0.00505	U	0.00606	U	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
Bromobenzene	108-86-1	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Bromochloromethane	74-97-5	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Bromoform	75-25-2	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Bromomethane	74-83-9	SW8260D	0.00225	U	0.00231	U	0.00241	U	0.0023	U	0.00217	U	0.00202	U	0.00242	U	0.00265	U	0.00233	U	0.0024	U	0.00191	U	0.0021	U
Carbon Disulfide	75-15-0	SW8260D	**0.00220**		**0.00243**		**0.00215**		**0.00540**		**0.00269**		**0.00126**		0.00121	U	0.00132	U	**0.00122**		**0.00183**		**0.00181**		**0.00240**	
Carbon Tetrachloride	56-23-5	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Chlorobenzene	108-90-7	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Chloroethane	75-00-3	SW8260D	0.00225	U	0.00231	U	0.00241	U	0.0023	U	0.00217	U	0.00202	U	0.00242	U	0.00265	U	0.00233	U	0.0024	U	0.00191	U	0.0021	U
Chloroform	67-66-3	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Chloromethane	74-87-3	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
cis-1,2-Dichloroethylene	156-59-2	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
cis-1,3-Dichloropropene	10061-01-5	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Dibromochloromethane	124-48-1	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Dibromomethane	74-95-3	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Dichlorobromomethane	75-27-4	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Dichlorodifluoromethane	75-71-8	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Hexachlorobutadiene	87-68-3	SW8260D	0.00562	U	0.00577	U	0.00603	U	0.00574	U	0.00543	U	0.00505	U	0.00606	U	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
Isopropylbenzene	98-82-8	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Methyl ethyl ketone (MEK)	78-93-3	SW8260D	0.00562	U	**0.00468**	**J**	**0.00539**	**J**	0.00574	U	0.00543	U	0.00505	U	0.00606	U	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
Methyl Iodide	74-88-4	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Methyl isobutyl ketone	108-10-1	SW8260D	0.00562	U	0.00577	U	0.00603	U	0.00574	U	0.00543	U	0.00505	U	0.00606	U	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
Methyl tert-butyl ether	1634-04-4	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Methylene Chloride	75-09-2	SW8260D	0.00562	U	0.00577	U	0.00603	U	0.00574	U	0.00543	U	0.00505	U	0.00606	U	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
n-Butylbenzene	104-51-8	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Naphthalene	91-20-3	SW8260D	0.00562	U	**0.227**		**0.00846**		**0.00306**	**J**	0.00543	U	**0.168**		**0.0216**		0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
n-Propylbenzene	103-65-1	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
sec-Butylbenzene	135-98-8	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Styrene	100-42-5	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Tert-Butylbenzene	98-06-6	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Tetrachloroethylene	127-18-4	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
trans-1,2-Dichloroethylene	156-60-5	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
trans-1,3-Dichloropropene	10061-02-6	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
trans-1,4-Dichloro-2-butene	110-57-6	SW8260D	0.00562	U	0.00577	U	0.00603	U	0.00574	U	0.00543	U	0.00505	U	0.00606	U	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
Trichloroethylene	79-01-6	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U
Trichlorofluoromethane	75-69-4	SW8260D	0.00225	U	0.00231	U	0.00241	U	0.0023	U	0.00217	U	0.00202	U	0.00242	U	0.00265	U	0.00233	U	0.0024	U	0.00191	U	0.0021	U
Vinyl Acetate	108-05-4	SW8260D	0.00562	U	0.00577	U	0.00603	U	0.00574	U	0.00543	U	0.00505	U	0.00606	U	0.00662	U	0.00583	U	0.00599	U	0.00478	U	0.00525	U
Vinyl Chloride	75-01-4	SW8260D	0.00112	U	0.00115	U	0.00121	U	0.00115	U	0.00109	U	0.00101	U	0.00121	U	0.00132	U	0.00117	U	0.0012	U	0.00096	U	0.00105	U

Analyte	CAS No.	Analytical Method	Sample ID: SP-1-A Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-B Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-C Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-D Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-E Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-F Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-G Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-H Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-I Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-J Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-K Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-L Sample Date: 11/4/2024	Qualifier
Semi-Volatile Organic Compounds (SVOCs; mg/kg)																										
1,2,4-Trichlorobenzene	120-82-1	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.02	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.02	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.02	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.02	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
2,2'-Oxybis[1-chloropropane]	108-60-1	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.02	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
2,4,5-Trichlorophenol	95-95-4	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
2,4,6-Trichlorophenol	88-06-2	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
2,4-Dichlorophenol	120-83-2	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
2,4-Dimethylphenol	105-67-9	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
2,4-Dinitrophenol	51-28-5	SW8270E	0.2	U	0.199	U	0.2	U	0.2	U	0.2	U	1	U	1	U	1	U	1	U	1	U	1	U	0.994	U
2,4-Dinitrotoluene	121-14-2	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
2,6-Dinitrotoluene	606-20-2	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
2-Chloronaphthalene	91-58-7	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
2-Chlorophenol	95-57-8	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
2-methylphenol (o-Cresol)	95-48-7	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
2-Nitroaniline	88-74-4	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
2-Nitrophenol	88-75-5	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
3,3'-Dichlorobenzidine	91-94-1	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
3-Nitroaniline	99-09-2	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
4,6-Dinitro-2-Methylphenol	534-52-1	SW8270E	0.2	U	0.199	U	0.2	U	0.2	U	0.2	U	1	U	1	U	1	U	1	U	1	U	1	U	0.994	U
4-Bromophenyl phenyl ether	101-55-3	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
4-Chloro-3-Methylphenol	59-50-7	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
4-Chloroaniline	106-47-8	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
4-Chlorophenyl-Phenylether	7005-72-3	SW8270E	0.0499	U	0.0499	U	0.05	U	0.0499	U	0.0500	U	0.25	U	0.251	U	0.25	U	0.25	U	0.25	U	0.25	U	0.248	U
4-methylphenol	106-44-5	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
4-Nitroaniline	100-01-6	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
4-Nitrophenol (p-Nitrophenol)	100-02-7	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
Benzoic Acid	65-85-0	SW8270E	0.2	U	0.199	U	0.2	U	0.2	U	0.2	U	1	U	1	U	1	U	1	U	1	U	1	U	0.994	U
Benzyl Alcohol	100-51-6	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Bis(2-Chloroethoxy)Methane	111-91-1	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Bis(2-Chloroethyl)Ether	111-44-4	SW8270E	0.0499	U	0.0499	U	0.05	U	0.0499	U	0.0500	U	0.25	U	0.251	U	0.25	U	0.25	U	0.25	U	0.25	U	0.248	U
Bis(2-Ethylhexyl) Phthalate	117-81-7	SW8270E	0.0499	U	0.0499	U	0.05	U	**0.0580**		**0.0642**		0.25	U	0.251	U	0.25	U	0.25	U	0.25	U	0.25	U	0.248	U
Butyl benzyl Phthalate	85-68-7	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	**0.1**		0.1	U	0.1	U	0.0994	U
Carbazole	86-74-8	SW8270E	**0.0141**	**J**	**0.0375**		**0.0187**	**J**	0.02	U	0.0200	U	**0.457**		**0.0998**		0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Dibutyl Phthalate	84-74-2	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Dibutyl Phthalate	84-74-2	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Diethyl Phthalate	84-66-2	SW8270E	0.0499	U	0.0499	U	0.05	U	0.0499	U	0.0500	U	0.25	U	0.251	U	0.25	U	0.25	U	0.25	U	0.25	U	0.248	U
Dimethyl Phthalate	131-11-3	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Di-N-Octyl Phthalate	117-84-0	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Hexachlorobenzene	118-74-1	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Hexachlorobutadiene	87-68-3	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Hexachlorocyclopentadiene	77-47-4	SW8270E	0.0999	U	0.0997	U	0.1	U	0.0998	U	0.0999	U	0.5	U	0.501	U	0.5	U	0.5	U	0.5	U	0.5	U	0.497	U
Hexachloroethane	67-72-1	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
Isophorone	78-59-1	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U
N-Nitrosodi-n-propylamine	621-64-7	SW8270E	0.02	U	0.0199	U	0.02	U	0.02	U	0.0200	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.0994	U

Analyte	CAS No.	Analytical Method	Sample ID: SP-1-A Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-B Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-C Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-D Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-E Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-F Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-G Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-H Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-I Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-J Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-K Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-L Sample Date: 11/4/2024	Qualifier
N-Nitrosodiphenylamine (as diphenylamine)	86-30-6	SW8270E	0.02 U		0.0199 U		0.02 U		0.02 U		0.0200 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.0994 U	
Nitrobenzene	98-95-3	SW8270E	0.02 U		0.0199 U		0.02 U		0.02 U		0.0200 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.0994 U	
Pentachlorophenol	87-86-5	SW8270E	0.0999 U		0.0997 U		0.1 U		0.0998 U		0.0999 U		0.5 U		0.501 U		0.5 U		0.5 U		0.5 U		0.5 U		0.497 U	
Phenol	108-95-2	SW8270E	0.02 U		0.0199 U		0.02 U		0.02 U		0.0200 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.1 U		0.0994 U	
Pyridine	110-86-1	SW8270E	0.0999 U		0.0997 U		0.1 U		0.0998 U		0.0999 U		0.5 U		0.501 U		0.5 U		0.5 U		0.5 U		0.5 U		0.497 U	
Non-Carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)																										
1-Methylnaphthalene	90-12-0	SW8270ESIM	**0.0469**		**0.0411**		**0.204**		**0.0348**		**0.0155**		**0.461**		**0.149**		**0.0217**		**0.0233**		**0.00870**		**0.0109**		**0.0209**	
2-Methylnaphthalene	91-57-6	SW8270ESIM	**0.102**		**0.0627**		**0.307**		**0.0574**		**0.0308**		**0.517**		**0.236**		**0.0307**		**0.0367**		**0.0125**		**0.0166**		**0.0292**	
Acenaphthene	83-32-9	SW8270ESIM	**0.133**		**0.313**		**0.694**		**0.0958**		**0.0410**		**3.9**		**0.729**		**0.0476**		**0.0370**		**0.0269**		**0.0246**		**0.0287**	
Acenaphthylene	208-96-8	SW8270ESIM	0.015 U		**0.0110**		**0.0147**		0.015 U		**0.00296 J**		**0.141**		**0.0210**		**0.0139**		**0.0226**		**0.00702**		**0.00863**		**0.0192**	
Anthracene	120-12-7	SW8270ESIM	**0.0534**		**0.0847**		**0.0813**		**0.0331**		**0.0143**		**1.48**		**0.229**		**0.0605**		**0.0194**		**0.0128**		**0.0135**		**0.0227**	
Benzo(g,h,i)perylene	191-24-2	SW8270ESIM	**0.0227**		**0.0528**		**0.0233**		**0.0227**		**0.0111**		**0.0614**		**0.0158**		**0.0286**		**0.00972**		**0.00883**		**0.00769**		**0.00972**	
Dibenzofuran	132-64-9	SW8270ESIM	**67.5**		**136**		**340**		**49.4**		**24.7**		**1730**		**381**		**126**		**35.3**		**16.0**		**14.2**		**27.4**	
Fluoranthene	206-44-0	SW8270ESIM	**0.219**		**0.46**		**0.271**		**0.219**		**0.125**		**8.21**		**1.35**		**1.28**		**0.145**		**0.0978**		**0.0885**		**0.185**	
Fluorene	86-73-7	SW8270ESIM	**0.0803**		**0.207**		**0.466**		**0.0633**		**0.0281**		**2.74**		**0.403**		**0.139**		**0.0341**		**0.0247**		**0.0185**		**0.0304**	
Naphthalene	91-20-3	SW8270ESIM	**0.12**		**0.0602**		**0.0859**		**0.106**		**0.0673**		**0.342**		**0.277**		**0.0726**		**0.135**		**0.0620**		**0.0619**		**0.145**	
Phenanthrene	85-01-8	SW8270ESIM	**0.26**		**0.38**		**0.66**		**0.191**		**0.0779**		**3.54**		**0.673**		**0.398**		**0.136**		**0.0828**		**0.0636**		**0.128**	
Pyrene	129-00-0	SW8270ESIM	**0.221**		**0.329**		**0.21**		**0.246**		**0.107**		**5.05**		**0.84**		**0.897**		**0.118**		**0.0853**		**0.0815**		**0.166**	
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs; mg/kg)																										
Benzo(a)anthracene	56-55-3	SW8270ESIM	**0.0427**		**0.124**		**0.0587**		**0.0423**		**0.0346**		**1.1**		**0.181**		**0.152**		**0.0258**		**0.0227**		**0.0244**		**0.0364**	
Benzo(a)pyrene	50-32-8	SW8270ESIM	**0.0272**		**0.0960**		**0.0429**		**0.0336**		**0.0228**		**0.256**		**0.0503**		**0.0259**		**0.0269**		**0.0253**		**0.0246**		**0.0406**	
Benzo(b)fluoranthene	205-99-2	SW8270ESIM	**0.0331**		**0.0991**		**0.0374**		**0.0444**		**0.0244**		**0.321**		**0.0584**		**0.0709**		**0.0252**		**0.0277**		**0.0266**		**0.0482**	
Benzo(j)fluoranthene	205-82-3	SW8270ESIM	**0.0128**		**0.0476**		**0.0179**		**0.0181**		**0.0128**		**0.178**		**0.0350**		**0.0452**		**0.0162**		**0.0164**		**0.0164**		**0.0253**	
Benzo(k)fluoranthene	207-08-9	SW8270ESIM	**0.0133**		**0.0486**		**0.0173**		**0.0188**		**0.0146**		**0.18**		**0.0340**		**0.0445**		**0.0163**		**0.0159**		**0.0155**		**0.0245**	
Benzofluoranthenes (Total)	n/a	SW8270ESIM	**0.0590**		**0.194**		**0.0715**		**0.0821**		**0.0519**		**0.688**		**0.132**		**0.161**		**0.0572**		**0.0594**		**0.0585**		**0.0968**	
Chrysene	218-01-9	SW8270ESIM	**0.0747**		**0.145**		**0.0766**		**0.0786**		**0.0399**		**0.959**		**0.16**		**0.188**		**0.0391**		**0.0346**		**0.0352**		**0.0610**	
Dibenzo(a,h)anthracene	53-70-3	SW8270ESIM	0.015 U		**0.0119**		0.015 U		0.015 U		**0.00269 J**		**0.0194**		0.025 U		**0.00321 J**		0.005 U		0.005 U		0.005 U		0.005 U	
Indeno(1,2,3-c,d)pyrene	193-39-5	SW8270ESIM	**0.0101**		**0.0498**		**0.0158**		**0.0137**		**0.0103**		**0.0596**		0.025 U		**0.0237**		**0.00812**		**0.00783**		**0.00694**		**0.00808**	
Polychlorinated Biphenyl (PCB) (mg/kg)																										
PCB-Aroclor 1016	12674-11-2	SW8082A	0.02 U		0.02 U		0.0199 U		0.0199 U		0.0199 U		0.0198 U		0.1 U		0.02 U		0.02 U		0.0199 U		0.0199 U		0.0997 U	
PCB-Aroclor 1221	11104-28-2	SW8082A	0.02 U		0.02 U		0.0199 U		0.0199 U		0.0199 U		0.0198 U		0.1 U		0.02 U		0.02 U		0.0199 U		0.0199 U		0.0997 U	
PCB-Aroclor 1232	11141-16-5	SW8082A	0.02 U		0.02 U		0.0199 U		0.0199 U		0.0199 U		0.0198 U		0.1 U		0.02 U		0.02 U		0.0199 U		0.0199 U		0.0997 U	
PCB-Aroclor 1242	53469-21-9	SW8082A	0.02 U		0.02 U		0.0199 U		0.0199 U		0.0199 U		0.0198 U		0.1 U		**0.0580**		0.02 U		0.0199 U		0.0199 U		0.0997 U	
PCB-Aroclor 1248	12672-29-6	SW8082A	0.02 U		0.02 U		0.0199 U		0.0199 U		0.0199 U		0.0198 U		0.1 U		0.02 U		0.02 U		**0.0646**		**0.0381**		0.0997 U	
PCB-Aroclor 1254	11097-69-1	SW8082A	0.02 U		0.02 U		0.0199 U		0.0199 U		**0.0400**		0.0198 U		0.1 U		0.02 U		0.02 U		**0.0667**		**0.0203**		0.0997 U	
PCB-Aroclor 1260	11096-82-5	SW8082A	0.02 U		0.02 U		0.0199 U		0.0199 U		0.0199 U		0.0198 U		0.1 U		0.02 U		0.02 U		**0.0613**		0.0199 U		0.0997 U	
PCB-Aroclor 1262	37324-23-5	SW8082A	0.02 U		0.02 U		0.0199 U		0.0199 U		0.0199 U		0.0198 U		0.1 U		0.02 U		0.02 U		0.0199 U		0.0199 U		0.0997 U	
PCB-Aroclor 1268	11100-14-4	SW8082A	0.02 U		0.02 U		0.0199 U		0.0199 U		0.0199 U		0.0198 U		0.1 U		0.02 U		0.02 U		0.0199 U		0.0199 U		0.0997 U	
Dioxins and Furans (ng/kg)																										
1,2,3,4,6,7,8-HpCDD	35822-46-9	EPA1613B	**26.0**		**143**		**59.7**		**9.38**		**157**		**4.77**		**5.25**		**178**		**8.49**		**4.45**		**21.3**		**8.16**	
1,2,3,4,6,7,8-HpCDF	67562-39-4	EPA1613B	**5.19**		**19.1**		**7.53**		**2.84**		**34.1**		**1.46**		**1.72**		**11.0**		**2.79**		**1.99**		**4.18**		**1.97**	
1,2,3,4,7,8,9-HpCDF	55673-89-7	EPA1613B	2.56 U		1.72 U		1.34 U		1.2 U		**1.02**		0.141 U		0.18 U		**0.691 J**		0.008 U		0.002 U		**0.245 J**		0.003 U	
1,2,3,4,7,8-HxCDD	39227-28-6	EPA1613B	1.14 U		1.09 U		1 U		0.674 U		0.93 U		0.16 U		0.203 U		**0.982 J**		0.073 U		0.029 U		0.025 U		0.028 U	
1,2,3,4,7,8-HxCDF	70648-26-9	EPA1613B	0.621 U		**1.09**		**0.567 J**		0.601 U		**1.41**		**0.238 J**		0.113 U		**0.722 J**		0.045 U		0.015 U		0.018 U		**0.343 J**	
1,2,3,6,7,8-HxCDD	57653-85-7	EPA1613B	1.2 U		**3.57**		**1.75**		0.675 U		**3.17**		**0.454 J**		**0.391 J**		**2.74**		0.083 U		**0.287 J**		**0.849 J**		**0.277 J**	
1,2,3,6,7,8-HxCDF	57117-44-9	EPA1613B	0.648 U		0.672 U		**0.412**		0.633 U		**0.654**		**0.202 J**		**0.270 J**		**0.797 J**		**0.544 J**		0.015 U		0.019 U		**0.353 J**	
1,2,3,7,8,9-HxCDD	19408-74-3	EPA1613B	1.27 U		1.2 U		1.1 U		0.732 U		**0.811 J**		**0.518 J**		0.227 U		**1.34**		0.085 U		0.032 U		**0.524 J**		**0.802 J**	
1,2,3,7,8,9-HxCDF	72918-21-9	EPA1613B	1.17 U		0.991 U		0.719 U		1.02 U		0.773 U		0.14 U		0.126 U		0.021 U		0.057 U		0.019 U		0.023 U		0.022 U	
1,2,3,7,8-PeCDD	40321-76-4	EPA1613B	0.874 U		0.997 U		0.725 U		0.69 U		0.708 U		**0.408 J**		**0.228 J**		**0.936 J**		0.331 U		0.116 U		0.125 U		**0.584 J**	
1,2,3,7,8-PeCDF	57117-41-6	EPA1613B	0.583 U		0.586 U		0.542 U		0.451 U		0.444 U		**0.553 J**		0.22 U		**0.442 J**		0.03 U		0.012 U		0.012 U		**0.732 J**	

Analyte	CAS No.	Analytical Method	Sample ID: SP-1-A Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-B Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-C Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-D Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-E Sample Date: 08/28/2024	Qualifier	Sample ID: SP-1-F Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-G Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-H Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-I Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-J Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-K Sample Date: 11/4/2024	Qualifier	Sample ID: SP-1-L Sample Date: 11/4/2024	Qualifier
2,3,4,6,7,8-HxCDF	60851-34-5	EPA1613B	**0.662**		0.742	U	0.443	U	0.653	U	0.54	U	**0.193**	**J**	**0.263**	**J**	**0.927**	**J**	**0.545**	**J**	**0.193**	**J**	0.019	U	**0.521**	**J**
2,3,4,7,8-PeCDF	57117-31-4	EPA1613B	0.62	U	**0.512**		0.558	U	0.481	U	0.508	U	**0.518**	**J**	0.224	U	**0.582**	**J**	**0.929**	**J**	0.137	U	0.131	U	**0.646**	**J**
2,3,7,8-TCDD	1746-01-6	EPA1613B	0.403	U	0.39	U	0.373	U	0.417	U	0.349	U	0.143	U	**0.335**	**J**	**0.316**	**J**	0.358	U	0.134	U	0.115	U	0.134	U
2,3,7,8-TCDF	51207-31-9	EPA1613B	0.529	U	**1.08**		**0.883**		0.392	U	**0.870**		**15.7**		**1.51**		**1.52**		**3.33**		**1.03**		**0.585**	**J**	**2.96**	
OCDD	3268-87-9	EPA1613B	**220**		**1260**		**546**		**85.6**		**1970**		**25.5**		**22.0**		**810**		**25.9**		**24.5**		**189**		**34.1**	
OCDF	39001-02-0	EPA1613B	3.64	U	**54.4**		**21.5**		**2.30**	**J**	**183**		**1.05**	**J**	**1.30**	**J**	**26.9**		**0.433**	**J**	**1.43**	**J**	**9.57**		**1.83**	**J**
Total HpCDD	37871-00-4	EPA1613B	**119**		**780**		**289**		**36.4**		**655**		**10.2**		**6.24**		**702**		**7.55**		**7.86**		**37.1**		**15.7**	
Total HpCDF	38998-75-3	EPA1613B	**17.2**		**75.4**		**24.8**		**2.84**		**217**		**2.91**		**3.41**		**37.4**		**2.79**		**1.99**		**16.0**		**1.97**	
Total HxCDD	34465-46-8	EPA1613B	**6.66**		**54.8**		**13.4**		**3.26**		**52.4**		**8.61**		**6.98**		**72.9**		**28.7**		**5.76**		**13.8**		**28.8**	
Total HxCDF	55684-94-1	EPA1613B	0	U	**36.8**		**9.49**		**1.58**		**43.5**		**1.26**		**1.60**		**13.0**		**2.11**		**0.124**	**J**	0	U	**3.76**	
Total PeCDD	36088-22-9	EPA1613B	**2.47**		**11.7**		**1.59**		0	U	**12.4**		**5.56**		**3.90**		**17.3**		**14.8**		**3.80**		**8.78**		**15.5**	
Total PeCDF	30402-15-4	EPA1613B	**3.40**		**8.82**		**7.40**		**1.11**		**0.905**	**J**	**1.81**		**2.02**		**6.29**		**0.637**	**J**	**2.28**		**1.22**		**13.3**	
Total TCDD	41903-57-5	EPA1613B	**2.54**		**19.7**		**9.35**		**1.30**		**20.3**		**11.1**		**5.41**		**21.3**		**29.6**		**5.45**		**12.0**		**24.8**	
Total TCDF	30402-14-3	EPA1613B	0	U	**6.00**		**0.759**	**J**	0	U	**1.33**		**25.2**		**4.09**		**12.4**		**26.7**		**4.18**		**4.41**		**28.6**	

Notes:

mg/kg = Milligrams per kilogram
ng/kg = Nanograms per kilogram
CAS = Chemical Abstract Service
n/a = not available
U = Analyte not detected greater than laboratory reporting limit
J = Reported result is estimated by laboratory
Bold indicates analyte detected above laboratory reporting limits

Table 2

Wastewater Chemical Analytical Results

Weyerhaeuser Mill A Former

Everett, Washington

Analyte	CAS No.	Analytical Method	Unit	Sample ID: Port of Everett Sample Date: 08/22/2024	Qualifier
Fats/Oils/Grease (Non-Polar)	n/a	EPA-1664	mg/L	5	U
Cyanide	57-12-5	SM4500-CN E	mg/L	0.05	U
Arsenic	7440-38-2	EPA 200.8	µg/L	**39**	
Cadmium	7440-43-9	EPA 200.8	µg/L	5	U
Chromium (total)	7440-47-3	EPA 200.8	µg/L	**98**	
Copper	7440-50-8	EPA 200.8	µg/L	**310**	
Lead	7439-92-1	EPA 200.8	µg/L	**270**	
Mercury	7439-97-6	EPA 245.1	µg/L	**0.84**	
Nickel	7440-02-0	EPA 200.8	µg/L	**120**	
Silver	7440-22-4	EPA 200.8	µg/L	5	U
Zinc	7440-66-6	EPA 200.8	µg/L	**460**	

Notes:

mg/L = Milligrams per liter

µg/L = Micrograms per liter

CAS = Chemical Abstract Service

n/a = not available

U = Analyte not detected greater than the laboratory reporting limit

Bold indicates analyte detected above laboratory reporting limits

Table 3

Import Material Chemical Analytical Results

Weyerhaeuser Mill A Former

Everett, Washington

Analyte	CAS No.	Analytical Method	Sample ID: CalPortland Sample Date: 08/26/2024	Qualifier	Sample ID: MLM Sample Date: 08/30/2024	Qualifier	Import Material Chemical Criteria
Metals (mg/kg)							
Antimony	7440-36-0	EPA 6010C/6020A	0.10	U	**0.16**	U	5
Arsenic	7440-38-2	EPA 6010C/6020A	**1.8**		**4.5**		20
Beryllium	7440-41-7	EPA 6010C/6020A	**0.14**		**0.20**		216
Cadmium	7440-43-9	EPA 6010C/6020A	0.10	U	**0.10**	U	1
Chromium (total)	7440-47-3	EPA 6010C/6020A	**14**		**32**		50
Copper	7440-50-8	EPA 6010C/6020A	**13**		**36**		36
Lead	7439-92-1	EPA 6010C/6020A	**1.6**		**5.0**		81
Mercury	7439-97-6	EPA 7470A/7471A	0.020	U	**0.055**	U	0.07
Nickel	7440-02-0	EPA 6010C/6020A	**23**		**46**		48
Selenium	7782-49-2	EPA 6010C/6020A	1.0	U	1.0	U	5
Silver	7440-22-4	EPA 6010C/6020A	0.10	U	0.10	U	0.3
Thallium	7440-28-0	EPA 6010C/6020A	0.50	U	0.50	U	5
Zinc	7440-66-6	EPA 6010C/6020A	**25**		**65**		85
Petroleum Hydrocarbons (mg/kg)							
Gasoline-Range	8006-61-9	NWTPH-Gx	3.0	U	3.0	U	30[1]
Diesel-Range	68334-30-5	NWTPH-Dx w/ SGC	25	U	25	U	2,000
Heavy Oil-Range	30109	NWTPH-Dx w/ SGC	50	U	50	U	2,000
Benzene	71-43-2	EPA 8260	0.00015	U	0.00016	U	0.001
Ethylbenzene	100-41-4	EPA 8260	0.00013	U	0.00013	U	0.015
Toluene	108-88-3	EPA 8260	0.000090	U	0.00050	U	0.055
m, p-Xylene	179601-23-1	EPA 8260	0.00025	U	0.00026	U	See Total Xylene
o-Xylene	95-47-6	EPA 8260	0.00016	U	0.00016	U	See Total Xylene
Xylenes	1330-20-7	EPA 8260	0.00025		0.00026		0.83
Volatile Organic Compounds (VOCs; mg/kg)							
1,1,1,2-Tetrachloroethane	630-20-6	EPA 8260	0.00012	U	0.00012	U	0.001
1,1,1-Trichloroethane	71-55-6	EPA 8260	0.00031	U	0.00032	U	21
1,1,2,2-Tetrachloroethane	79-34-5	EPA 8260	0.00022	U	0.00023	U	0.002
1,1,2-trichloro-1,2,2- trifluoroethane (CFC113)	76-13-1	EPA 8260	--		--		116
1,1,2-Trichloroethane	79-00-5	EPA 8260	0.000078	U	0.000081	U	0.001
1,1-Dichloroethane	75-34-3	EPA 8260	0.00016	U	0.00016	U	0.0026
1,1-Dichloroethene	75-35-4	EPA 8260	0.00030	U	0.00031	U	1.4
1,1-Dichloropropene	563-58-6	EPA 8260	0.00026	U	0.00027	U	NE
1,2,3-Trichlorobenzene	87-61-6	EPA 8260	0.000090	U	0.000093	U	NE
1,2,3-Trichloropropane	96-18-4	EPA 8260	0.000026	U	0.000027	U	0.002
1,2,4-Trichlorobenzene	120-82-1	EPA 8260	0.00018	U	0.00018	U	0.005
1,2,4-Trimethylbenzene	95-63-6	EPA 8260	0.00016	U	0.00017	U	NE
1,2-Dibromo-3-chloropropane	96-12-8	EPA 8260	0.000069	U	0.000071	U	0.005
1,2-Dichlorobenzene	95-50-1	EPA 8260	0.00011	U	0.00011	U	0.53
1,2-Dichloroethane (EDC)	107-06-2	EPA 8260	0.000090	U	0.000094	U	0.019
1,2-Dichloropropane	78-87-5	EPA 8260	0.000096	U	0.00010	U	0.001
1,3,5-Trimethylbenzene	108-67-8	EPA 8260	0.00017	U	0.00018	U	0.071
1,3-Dichlorobenzene	541-73-1	EPA 8260	0.000099	U	0.00010	U	NE
1,3-Dichloropropane	142-28-9	EPA 8260	0.000052	U	0.000054	U	NE
1,4-Dichlorobenzene	106-46-7	EPA 8260	0.00012	U	0.00013	U	0.067
2,2-Dichloropropane	594-20-7	EPA 8260	0.00023	U	0.00024	U	NE
2-Butanone (MEK)	78-93-3	EPA 8260	0.050	U	**0.00090**	U	1.4
2-Chloroethyl Vinyl Ether	110-75-8	EPA 8260	--		--		NE
2-Chlorotoluene	95-49-8	EPA 8260	0.00016	U	0.00017	U	0.11
2-Hexanone	591-78-6	EPA 8260	0.00053	U	0.00055	U	NE
4-Chlorotoluene	106-43-4	EPA 8260	0.00011	U	0.00012	U	NE
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	108-10-1	EPA 8260	0.00037	U	0.00038	U	0.19
Acetone	67-64-1	EPA 8260	0.050	U	0.010	U	2.1
Acrolein	107-02-8	EPA 8260	--		--		0.05
Acrylonitrile	107-13-1	EPA 8260	0.00021	U	0.00021	U	0.005
Bromobenzene	108-86-1	EPA 8260	0.00014	U	0.00015	U	NE
Bromochloromethane	74-97-5	EPA 8260	0.00021	U	0.00022	U	NE
Bromoform	75-25-2	EPA 8260	0.00011	U	0.00011	U	0.005
Bromomethane	74-83-9	EPA 8260	0.00032	U	0.00033	U	0.28
Carbon Disulfide	75-15-0	EPA 8260	0.00021	U	0.00050	U	0.27
Carbon Tetrachloride	56-23-5	EPA 8260	0.00016	U	0.00016	U	0.001
Chlorobenzene	108-90-7	EPA 8260	0.000086	U	0.000089	U	0.1
Chloroethane	75-00-3	EPA 8260	0.00024	U	0.00025	U	NE
Chloroform	67-66-3	EPA 8260	0.00029	U	0.00050	U	0.019
Chloromethane	74-87-3	EPA 8260	0.00028	U	0.00029	U	NE
Cis-1,2-Dichloroethene	156-59-2	EPA 8260	0.00018	U	0.00019	U	0.0052
Cis-1,3-Dichloropropene	10061-01-5	EPA 8260	0.00013	U	0.00014	U	NE
Dibromochloromethane	124-48-1	EPA 8260	0.000046	U	0.000048	U	0.001
Dibromomethane	74-95-3	EPA 8260	0.00031	U	0.00032	U	0.025
Dichlorobromomethane	75-27-4	EPA 8260	0.000094	U	0.000098	U	0.001
Dichlorodifluoromethane (CFC 12)	75-71-8	EPA 8260	0.00031	U	0.00032	U	0.53
1,2-Dibromoethane (EDB)	106-93-4	EPA 8260	0.000073	U	0.000076	U	0.001

Analyte	CAS No.	Analytical Method	Sample ID: CalPortland Sample Date: 08/26/2024	Qualifier	Sample ID: MLM Sample Date: 08/30/2024	Qualifier	Import Material Chemical Criteria
Hexachlorobutadiene	87-68-3	EPA 8260	0.00016	U	0.00017	U	0.027
Isopropylbenzene	98-82-8	EPA 8260	0.00012	U	0.00012	U	0.79
Methyl Iodide	74-88-4	EPA 8260	--		--		NE
Methyl t-Butyl Ether (MTBE)	1634-04-4	EPA 8260	0.00031	U	0.00033	U	0.006
Methylene Chloride	75-09-2	EPA 8260	0.0050	U	0.0050	U	0.03
Naphthalene	91-20-3	EPA 8260	0.00012	U	0.00012	U	7
n-Butylbenzene	104-51-8	EPA 8260	0.00023	U	0.00024	U	0.71
n-Propylbenzene	103-65-1	EPA 8260	0.00012	U	0.00012	U	0.88
p-Isopropyltoluene	99-87-6	EPA 8260	0.00015	U	0.00015	U	NE
sec-Butylbenzene	135-98-8	EPA 8260	0.00018	U	0.00018	U	1.3
Styrene	100-42-5	EPA 8260	0.00012	U	0.00013	U	0.12
tert-Butylbenzene	98-06-6	EPA 8260	0.00029	U	0.00030	U	1
Tetrachloroethene (PCE)	127-18-4	EPA 8260	0.00020	U	0.00020	U	0.0016
Trans-1,2-Dichloroethene	156-60-5	EPA 8260	0.00029	U	0.00030	U	0.32
Trans-1,3-Dichloropropene	10061-02-6	EPA 8260	0.00021	U	0.00021	U	NE
Trans-1,4-Dichloro-2-butene	110-57-6	EPA 8260	--		--		NE
Trichloroethene (TCE)	79-01-6	EPA 8260	0.00017	U	0.00017	U	0.001
Trichlorofluoromethane (CFC 11)	75-69-4	EPA 8260	0.00020	U	0.00020	U	0.79
Vinyl acetate	108-05-4	EPA 8260	--		--		2.3
Vinyl Chloride	75-01-4	EPA 8260	0.0000082	U	0.0000085	U	0.001
Semi-Volatile Organic Compounds (SVOCs; mg/kg)							
1,2,4-Trichlorobenzene	120-82-1	EPA 8270	0.00018	U	0.00018	U	0.067
1,2-Dichlorobenzene	95-50-1	EPA 8270	0.00011	U	0.00011	U	0.53
1,3-Dichlorobenzene	541-73-1	EPA 8270	0.000099	U	0.00010	U	NE
1,4-Dichlorobenzene	106-46-7	EPA 8270	0.00012	U	0.00013	U	0.067
2,2'-Oxybis[1-chloropropane]	108-60-1	EPA 8270	--		--		0.067
2,4,5-Trichlorophenol	95-95-4	EPA 8270	0.037	U	0.039	U	1.1
2,4,6-Trichlorophenol	88-06-2	EPA 8270	0.037	U	0.040	U	0.33
2,4-Dichlorophenol	120-83-2	EPA 8270	0.23	U	0.25	U	0.33
2,4-Dimethylphenol	105-67-9	EPA 8270	0.060	U	0.064	U	0.067
2,4-Dinitrophenol	51-28-5	EPA 8270	0.049	U	0.053	U	0.67
2,4-Dinitrotoluene	121-14-2	EPA 8270	0.020	U	0.022	U	0.33
2,6-Dinitrotoluene	606-20-2	EPA 8270	0.035	U	0.037	U	0.33
2-Chloronaphthalene	91-58-7	EPA 8270	0.030	U	0.032	U	0.28
2-Chlorophenol	95-57-8	EPA 8270	0.091	U	0.098	U	0.067
2-Nitroaniline	88-74-4	EPA 8270	0.018	U	0.019	U	0.33
2-Nitrophenol	88-75-5	EPA 8270	0.029	U	0.031	U	NE
3,3'-Dichlorobenzidine	91-94-1	EPA 8270	0.16	U	0.17	U	0.33
3-Nitroaniline	99-09-2	EPA 8270	0.54	U	0.58	U	NE
4,6-Dinitro-2-methylphenol	534-52-1	EPA 8270	0.027	U	0.028	U	0.67
4-Bromophenyl-phenylether	101-55-3	EPA 8270	0.034	U	0.036	U	NE
4-Chloro-3-Methylphenol	59-50-7	EPA 8270	0.30	U	0.32	U	0.33
4-Chloroaniline	106-47-8	EPA 8270	0.53	U	0.57	U	0.33
4-Chlorophenyl-phenylether	7005-72-3	EPA 8270	0.039	U	0.041	U	NE
4-Nitroaniline	100-01-6	EPA 8270	0.12	U	0.13	U	NE
4-Nitrophenol	100-02-7	EPA 8270	0.051	U	0.055	U	NE
Benzoic acid	65-85-0	EPA 8270	0.67	U	0.71	U	18
Benzyl alcohol	100-51-6	EPA 8270	0.048	U	0.051	U	0.33
bis(2-Chloroethoxy)methane	111-91-1	EPA 8270	0.11	U	0.12	U	NE
bis(2-chloroethyl)ether	111-44-4	EPA 8270	0.090	U	0.097	U	0.067
bis(2-Ethylhexyl)phthalate	117-81-7	EPA 8270	0.021	U	0.022	U	0.33
Butylbenzylphthalate	85-68-7	EPA 8270	0.021	U	0.023	U	0.067
Carbazole	86-74-8	EPA 8270	0.10	U	0.11	U	NE
Dibenzofuran	132-64-9	EPA 8270	0.030	U	0.032	U	0.15
Diethylphthalate	84-66-2	EPA 8270	0.039	U	0.042	U	0.074
Dimethylphthalate	131-11-3	EPA 8270	0.040	U	0.042	U	NE
Di-n-butylphthalate	84-74-2	EPA 8270	0.032	U	0.034	U	0.067
Di-n-octylphthalate	117-84-0	EPA 8270	0.020	U	0.022	U	13000
Hexachlorobenzene	118-74-1	EPA 8270	0.034	U	0.036	U	0.08
Hexachlorobutadiene	87-68-3	EPA 8270	0.00016	U	0.00017	U	0.067
Hexachlorocyclopentadiene	77-47-4	EPA 8270	0.023	U	0.025	U	1
Hexachloroethane	67-72-1	EPA 8270	0.019	U	0.020	U	0.067
Isophorone	78-59-1	EPA 8270	0.066	U	0.070	U	0.067
Nitrobenzene	98-95-3	EPA 8270	0.018	U	0.019	U	0.067
n-Nitroso-di-n-propylamine	621-64-7	EPA 8270	0.087	U	0.094	U	0.067
n-Nitrosodiphenylamine	86-30-6	EPA 8270	0.032	U	0.034	U	0.067
o-Cresol (2-Methylphenol)	95-48-7	EPA 8270	0.032	U	0.034	U	0.15
p-Cresol (4-Methylphenol)	106-44-5	EPA 8270	--		--		0.47
3 & 4 Methylphenol	n/a	EPA 8270	0.040		0.043		0.47
Pentachlorophenol	87-86-5	EPA 8270	0.14	U	0.15	U	0.17
Phenol	108-95-2	EPA 8270	0.037	U	0.040	U	22
Non-carcinogenic Polycyclic Aromatic Hydrocarbons (PAHs; mg/kg)							
1-Methylnaphthalene	90-12-0	EPA 8270/SIM	0.00040	U	0.00043	U	0.005
2-Methylnaphthalene	91-57-6	EPA 8270/SIM	0.00049	U	0.00052	U	0.088
acenaphthene	83-32-9	EPA 8270/SIM	0.00033	U	0.00035	U	0.16
acenaphthylene	208-96-8	EPA 8270/SIM	0.00036	U	0.00038	U	NE
anthracene	120-12-7	EPA 8270/SIM	0.00054	U	0.00058	U	2.4

Analyte	CAS No.	Analytical Method	Sample ID: CalPortland Sample Date: 08/26/2024	Qualifier	Sample ID: MLM Sample Date: 08/30/2024	Qualifier	Import Material Chemical Criteria
Benzo[g,h,i]perylene	191-24-2	EPA 8270/SIM	0.00071	U	0.00075	U	NE
Fluoranthene	206-44-0	EPA 8270/SIM	0.00052	U	0.00055	U	0.3
Fluorene	86-73-7	EPA 8270/SIM	0.00048	U	0.00052	U	0.08
Naphthalene	91-20-3	EPA 8270/SIM	0.00012	U	0.00012	U	7
Phenanthrene	85-01-8	EPA 8270/SIM	0.00064	U	0.00068	U	NE
Pyrene	129-00-0	EPA 8270/SIM	0.00056	U	0.00060	U	0.55
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs; mg/kg)							
Benzo[a]anthracene	56-55-3	EPA 8270/SIM	0.00041	U	0.00044	U	0.005
Benzo[a]pyrene	50-32-8	EPA 8270/SIM	0.00044	U	0.00048	U	0.0097
Benzo[b]fluoranthene	205-99-2	EPA 8270/SIM	0.00055	U	0.00059	U	0.012
Benzo[k]fluoranthene	207-08-9	EPA 8270/SIM	0.00045	U	0.00048	U	0.012
Chrysene	218-01-9	EPA 8270/SIM	0.00056	U	0.00060	U	0.0064
Dibenz[a,h]anthracene	53-70-3	EPA 8270/SIM	0.00062	U	0.00067	U	0.018
Indeno[1,2,3-c,d]pyrene	193-39-5	EPA 8270/SIM	0.00053	U	0.00057	U	0.035
Total cPAH TEQ[2]	n/a	EPA 8270/SIM	0.00035		0.00038		0.01
Polychlorinated Biphenyls (PCBs) (mg/kg)							
PCB-aroclor 1016	12674-11-2	EPA 8082	0.00081	U	0.00095	U	See Total PCB
PCB-aroclor 1221	11104-28-2	EPA 8082	0.00081	U	0.00095	U	
PCB-aroclor 1232	11141-16-5	EPA 8082	0.00081	U	0.00095	U	
PCB-aroclor 1242	53469-21-9	EPA 8082	0.00081	U	0.00095	U	
PCB-aroclor 1248	12672-29-6	EPA 8082	0.00081	U	0.00095	U	
PCB-aroclor 1254	11097-69-1	EPA 8082	0.00081	U	0.00095	U	
PCB-aroclor 1260	11096-82-5	EPA 8082	0.00081	U	0.00095	U	
PCB-aroclor 1268	11100-14-4	EPA 8082	0.00081	U	0.00095	U	
Total PCBs (Sum of Aroclors)	1336-36-3	EPA 8082	0.00081		0.00095		0.033
Dioxins and Furans (ng/kg)							
1,2,3,4,6,7,8-HpCDD	35822-46-9	EPA 1316	5.2	U	5.3	U	See TEQ
1,2,3,4,6,7,8-HpCDF	67562-39-4	EPA 1316	5.2	U	5.3	U	
1,2,3,4,7,8,9-HpCDF	55673-89-7	EPA 1316	5.2	U	5.3	U	
1,2,3,4,7,8-HxCDD	39227-28-6	EPA 1316	5.2	U	5.3	U	
1,2,3,4,7,8-HxCDF	70648-26-9	EPA 1316	5.2	U	5.3	U	
1,2,3,6,7,8-HxCDD	57653-85-7	EPA 1316	5.2	U	5.3	U	
1,2,3,6,7,8-HxCDF	57117-44-9	EPA 1316	5.2	U	5.3	U	
1,2,3,7,8,9-HxCDD	19408-74-3	EPA 1316	5.2	U	5.3	U	
1,2,3,7,8,9-HxCDF	72918-21-9	EPA 1316	5.2	U	5.3	U	
1,2,3,7,8-PeCDD	40321-76-4	EPA 1316	5.2	U	5.3	U	
1,2,3,7,8-PeCDF	57117-41-6	EPA 1316	5.2	U	5.3	U	
2,3,4,6,7,8-HxCDF	60851-34-5	EPA 1316	5.2	U	5.3	U	
2,3,4,7,8-PeCDF	57117-31-4	EPA 1316	5.2	U	5.3	U	
2,3,7,8-TCDD	1746-01-6	EPA 1316	1	U	1.1	U	
2,3,7,8-TCDF	51207-31-9	EPA 1316	1	U	1.1	U	
OCDD	3268-87-9	EPA 1316	10	U	11	U	
OCDF	39001-02-0	EPA 1316	10	U	11	U	
Total dioxins/furans TEQ[3]	n/a	EPA 1316	3.57	U	3.68	U	5.2

Notes:

[1] Value for gasoline-range petroleum hydrocarbons if benzene is present. If benzene is not present, screening level is 100 mg/kg.
[2] Total cPAH TEQs were calculated using Toxicity Equivalency Factors (TEFs) from MTCA Table 708-2 (WAC 173-340-900).
[3] Total dioxin/furan TEQs were calculated using United States Environmental Protection Agency (USEPA) TEF values for human health (EPA 2003).

mg/kg = Milligrams per kilogram
ng/kg = Nanograms per kilogram
n/a = not available
CAS = Chemical Abstract Service
-- = Not analyzed
NE = Not established
TEQ = Toxic equivalency quotient
U = Analyte not detected greater than laboratory reporting limit
J = Reported result is estimated by laboratory
Bold indicates analyte detected above laboratory reporting limits

Table 4

Pre- and Post-Interim Action Outfall 001 Stormwater Sample Chemical Analytical Results

Weyerhaeuser Mill A Former

Everett, Washington

Parameter	Units	Analytical Method	Benchmark Value	Pre-Interim Action Outfall 001 Stormwater Sample Results (Sample Date: 09/27/2024)	Post-Interim Action Outfall 001 Stormwater Sample Results (Sample Date: 02/25/2025)
Visible Oil Sheen	Yes/No	n/a	No visible oil sheen	No visible oil sheen	No visible oil sheen
Turbidity	NTU	Field Meter	25	**6.02**	**6.07**
pH	Standard Units	Field Meter	Between 5.0 and 9.0	**7.11**	**7.61**
Total Suspended Solids	mg/L	SM2540-D	30	25 U	25 U
Copper, Total	µg/L	EPA 200.8	14	**9.5**	2 U
Zinc, Total	µg/L	EPA 200.8	117	**83**	**31**
Petroleum Hydrocarbons (Diesel Fraction)	mg/L	NWTPH-Dx	10	**0.5**	**0.18**

Notes:

mg/L = Milligrams per liter

µg/L = Micrograms per liter

EPA = United States Environmental Protection Agency

n/a = not available

NTU = Nephelometric Turbidity Unit

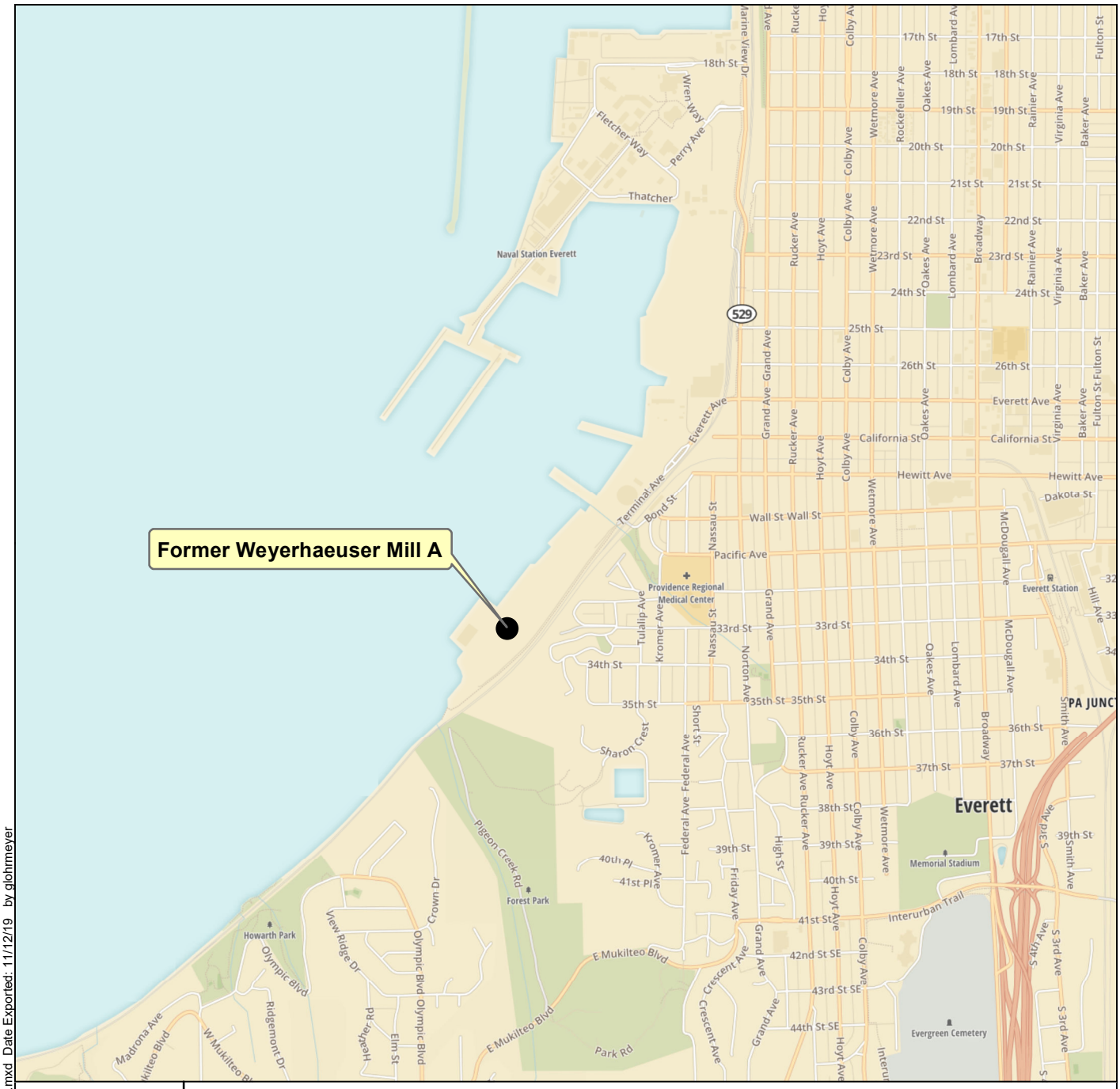
NWTPH = Northwest Total Petroleum Hydrocarbon

SM = Standard Method

U = Not detected at level above the identified reporting limit

Bold text identify that the parameter was detected.

Figures



N
W E
S

2,000 0 2,000

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2016

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 1

P:\0\0676020\GIS\MXD\MarineArea_RI_Report\0676020006_F01_VicinityMap.mxd Date Exported: 11/12/19 by glohrmeyer

Port Gardner Bay

Outer Harbor Line

East Waterway

Outer Harbor Line

Inner Harbor Line

South Terminal Wharf (Pile Supported)

Pier 1 (Pile Supported)

Outfall 001

Outfall 002

Pacific Terminal Wharf (Pile Supported)

Outfall 004

Outfall 006

Public Beach

Public Open Space

Equipment Storage Area

South Terminal

Pacific Terminal

Biofiltration Swale (Historically Mill A Creek)

BNSF Rail Line

Public Access Path/ Pigeon Creek Trail (Fenced)

P:\0067602001GIS\MXD\MarineArea_RI_Report\0067602007_T2700_F02_SitePlan.mxd Date Exported: 03/25/25 by maugust

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Base aerial from ESRI, 2024

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

- Approximate Marine Area of the Weyerhaeuser Mill A Former Site
- Approximate Upland Area of the Weyerhaeuser Mill A Former Site
- Current Kimberly-Clark/City of Everett/ City of Marysville Outfall 100 (approximate)
- Historical Kimberly-Clark/Weyerhaeuser Outfall SW001 (approximate)
- Biofiltration Swale
- Public Access Path/Pigeon Creek Trail
- Unnamed Creek
- Bulkhead (Dashed where burried)
- Topography/Bathymetry Contour (Feet Mean Lower Low Water [MLLW])
- Railway
- Combined Sewer Overflow (CSO)
- Current Stormwater Outfall

N W E S

300 0 300

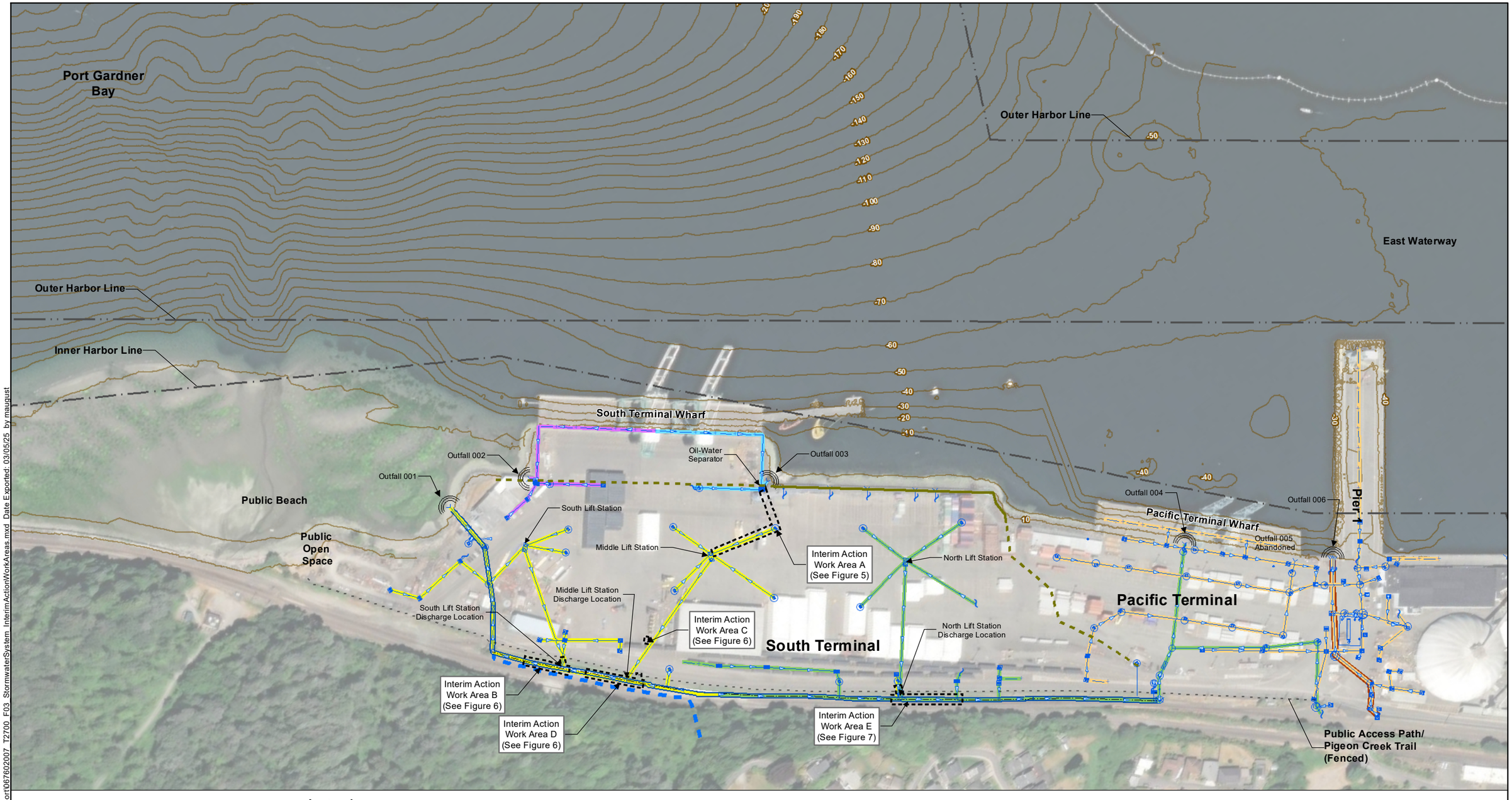
Feet

Site Plan

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 2



P:\010676020\GIS\MXD\MarineArea_RI_Report\0676020007_T2700_F03_StormwaterSystem_InterimActionWorkAreas.mxd Date Exported: 03/05/25 by maugust

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Base aerial from ESRI, 2024

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

- Approximate Interim Action Work Area
- Bulkhead (Dashed where burried)
- Biofiltration Swale
- Topography/Bathymetry Contour
- Public Access Path/Pigeon Creek Trail
- Unnamed Creek
- Outfall 001 Stormwater Drain Network
- Outfall 002 Stormwater Drain Network
- Outfall 003 Stormwater Drain Network
- Outfall 004 Stormwater Drain Network
- Outfall 006 Stormwater Drain Network
- City of Everett Combined Sewer Overflow (CSO)
- Storm Drain (Inferred)
- Swale
- Trench Drain
- Culvert End
- End of Pipe is Unknown
- Flow Direction

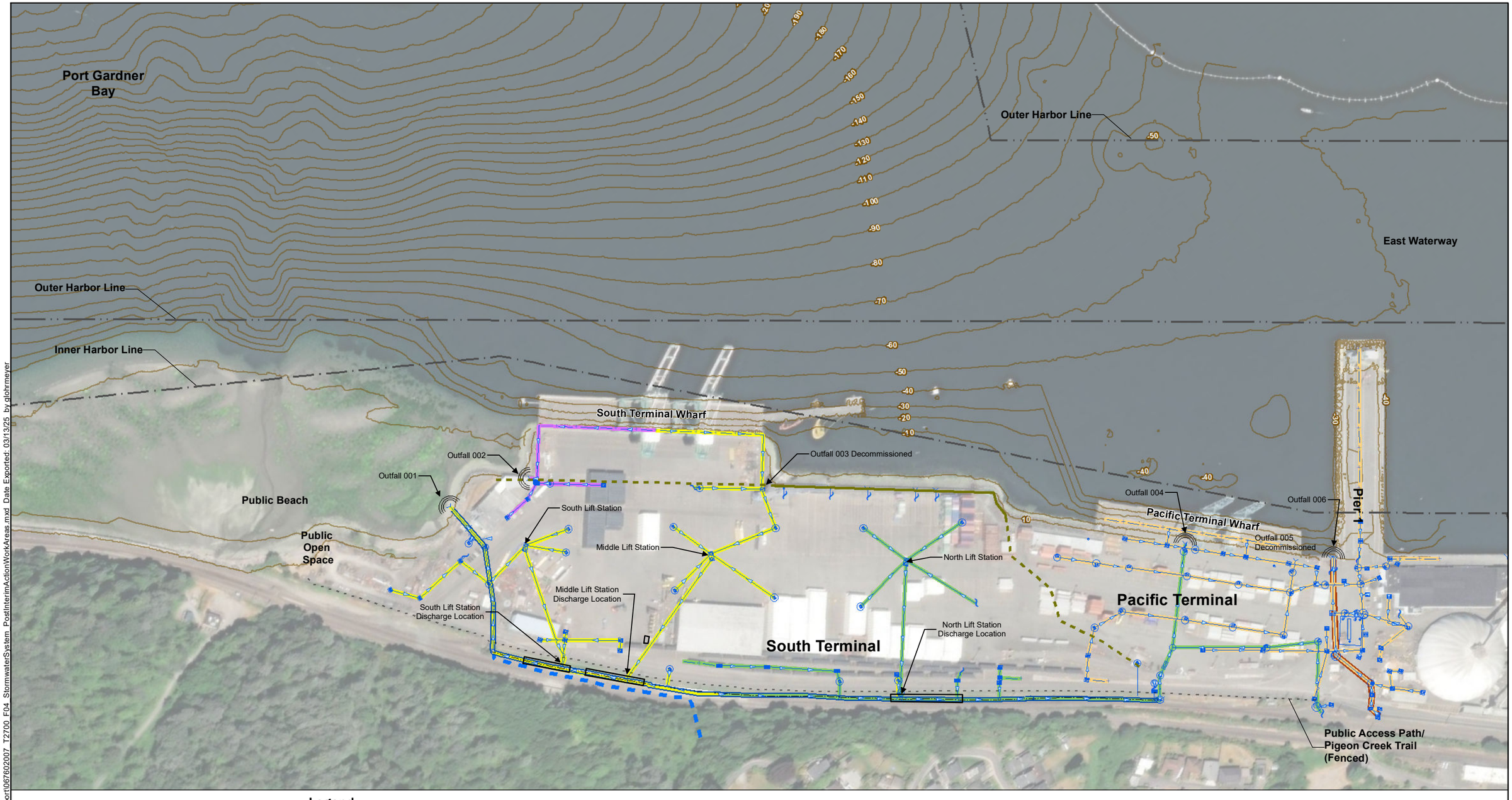
300 0 300
Feet

Pre-Interim Action Stormwater System and Interim Action Work Areas

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 3



P:\010676020\GIS\MXD\MarineArea_RI_Report\0676020007_T2700_F04_StormwaterSystem_PostInterimActionWorkAreas.mxd Date Exported: 03/13/25 by glohrmeyer

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Base aerial from ESRI, 2024

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

- Bulkhead (Dashed where burried)
- Topography/Bathymetry Contour
- Public Access Path/Pigeon Creek Trail
- Unnamed Creek
- Outfall 001 Stormwater Drain Network
- Outfall 002 Stormwater Drain Network
- Outfall 003 Stormwater Drain Network
- Outfall 004 Stormwater Drain Network
- Outfall 006 Stormwater Drain Network
- City of Everett Combined Sewer Overflow (CSO)
- Biofiltration Swale
- Bioretention Treatment Cell
- Storm Drain (Inferred)
- Swale
- Trench Drain
- Culvert End
- End of Pipe is Unknown
- Flow Direction

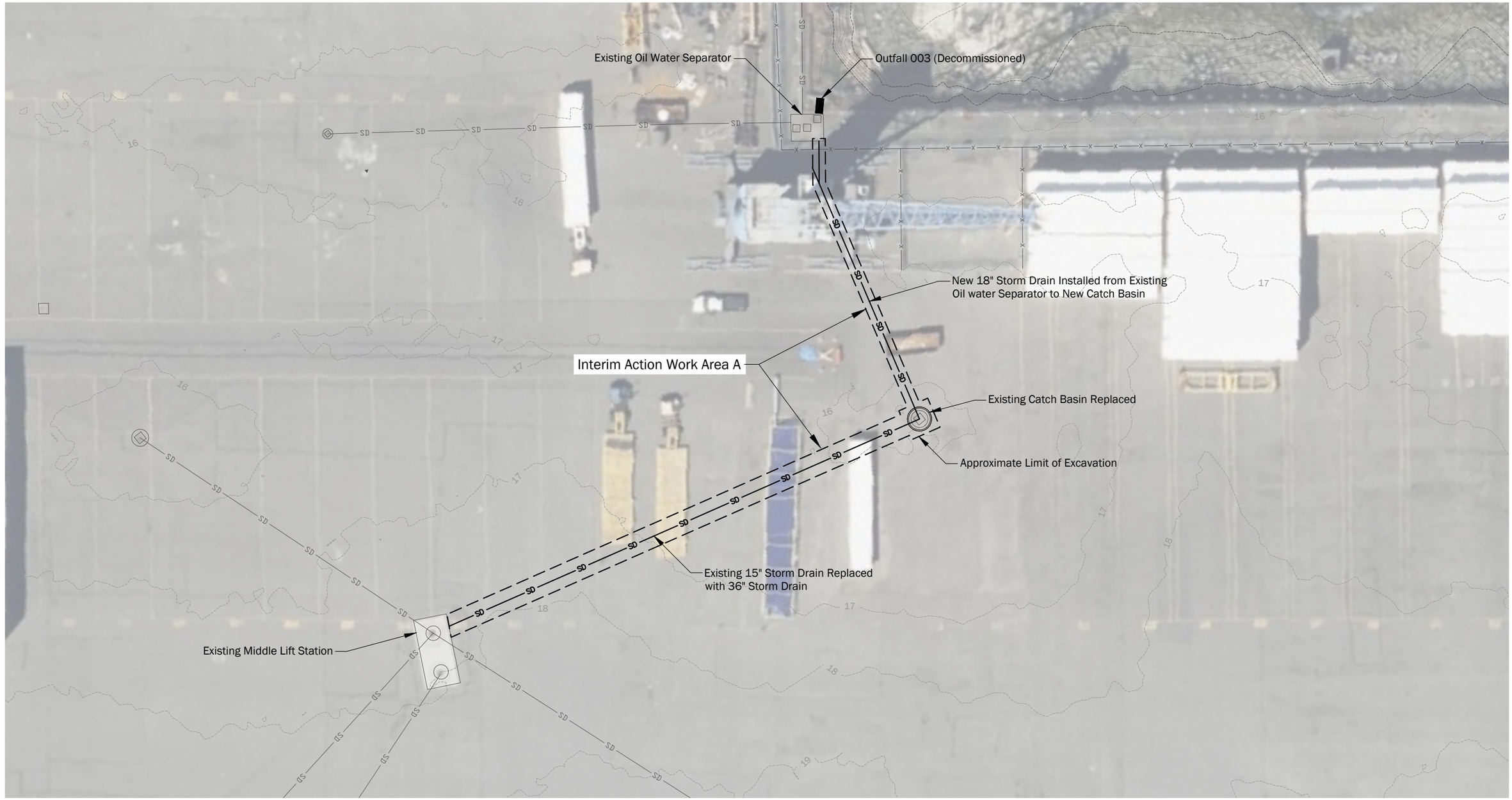
300 0 300
Feet

Post-Interim Action Stormwater System

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 4



Notes:

Source(s):

- Aerial from Microsoft Bing, dated 2024
- Base from KPFF, dated 5/24/2024

Coordinate System: NAD83 Washington State Planes, North Zone, US Foot

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

Legend

- -45 — Existing Contour (Feet MLLW)
- x—x — Existing Fence
- Existing Catch Basin
- SD — Existing Storm Drain
- SD — New Storm Drain
- Approximate Interim Action Work Area

N

0 40
Feet

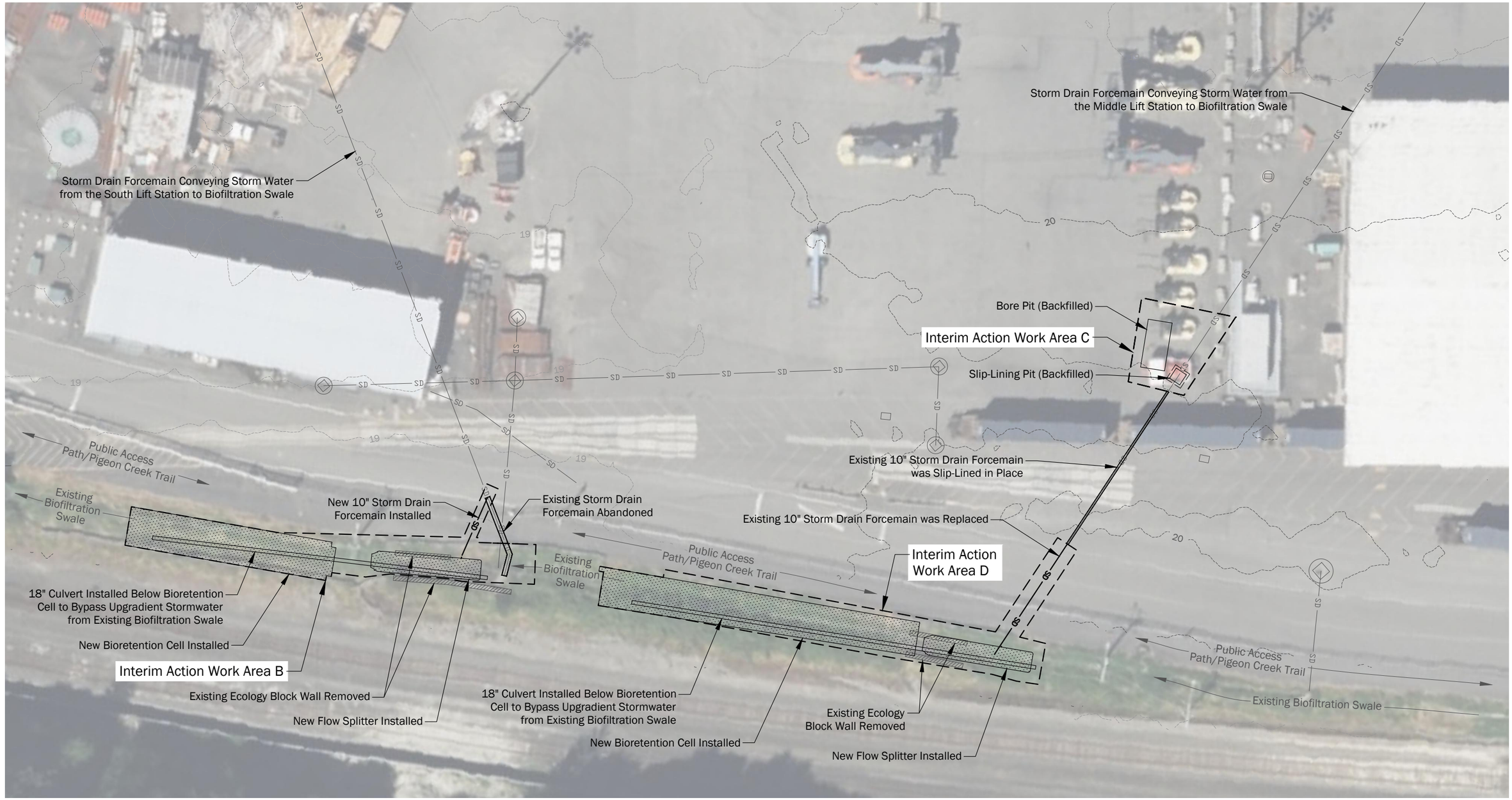
Interim Action Work Area A

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 5

P:\0\0676020\CAD\07\Task 2700 (Stormwater Interim Action Completion)\0067602007_F5_Interim Action Work Area A.dwg 5 Date Exported:3/26/2025 11:58 AM - by Michael R. Woods



Notes:

Source(s):
- Aerial from Microsoft Bing, dated 2024
- Base from KPFF, dated 5/24/2024

Coordinate System: NAD83 Washington State Planes, North Zone, US Foot

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

Legend

- -45 — Existing Contour (Feet MLLW)
- Existing Catch Basin
- SD — Existing Storm Drain
- SD — New Storm Drain
- Approximate Interim Action Work Area
- Approximate Footprint of Bioretention Cell and Flow Control Structures

N

0 40
Feet

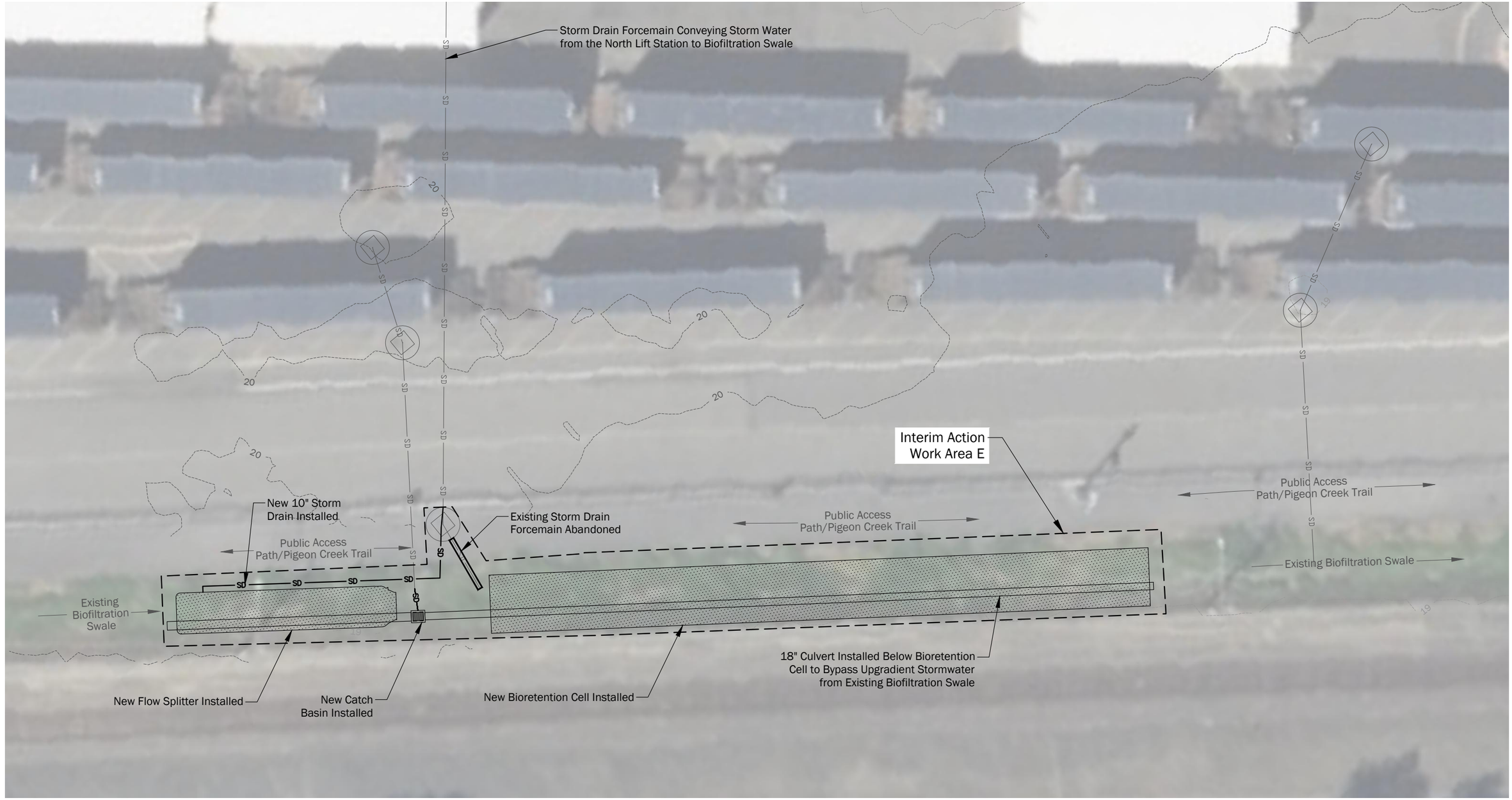
Interim Action Work Area B, C and D

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 6

P:\0\0676020\CAD\07\Task 2700 (Stormwater Interim Action Completion)\0067602007_F6_Interim Action Work Area B, C and D.dwg 6 Date Exported:4/24/2025 1:41 PM - by Chad Stickel



Notes:

Source(s):
- Aerial from Microsoft Bing, dated 2024
- Base from KPFF, dated 5/24/2024

Coordinate System: NAD83 Washington State Planes, North Zone, US Foot

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

Legend

- -45 — Existing Contour (Feet MLLW)
- Existing Catch Basin
- SD — Existing Storm Drain
- SD — New Storm Drain
- Approximate Interim Action Work Area
- Approximate Footprint of Bioretention Cell and Flow Control Structures

N

0 20
Feet

Interim Action Work Area E

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 7

P:\0\0676020\CAD\07\Task 2700 |Stormwater Interim Action Completion|\0067602007_F7_Interim Action Work Area E.dwg 7 Interim Action Work Area E Date Exported:3/26/2025 12:42 PM - by Michael R. Woods



Excavation Materials Encountered

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 8

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

https://geoengineers.sharepoint.com/sites/067602007/Finals/Figure/F08-11 and F15 Date Exported: 08/05/2025



Excavation Materials Encountered

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 9

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

https://geoengineers.sharepoint.com/sites/067602007/Finals/Figure/F08-11 and F15 Date Exported: 08/05/2025



Excavation Materials Encountered

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 10

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

https://geoengineers.sharepoint.com/sites/067602007/Finals/Figure/F08-11 and F15 Date Exported: 08/05/2025



Excavation Materials Encountered

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 15

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

https://geoengineers.sharepoint.com/sites/067602007/Finals/Figure/F08-11 and F15 Date Exported: 08/05/2025



Excavation Materials Encountered

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 11

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.



Excavation Materials Encountered

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 12

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.



Excavation Materials Encountered

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 13

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.



Excavation Materials Encountered

Weyerhaeuser Mill A Former
Everett, Washington

GeoEngineers

Figure 14

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

Appendices

Appendix A
Permits and Substantive Requirements

Port of EVERETT

MITIGATED DETERMINATION OF NON-SIGNIFICANCE (MDNS)
PORT OF EVERETT
Mill A Interim Action No. 2: South Terminal Stormwater Retrofit
SEPA File No. 2024-05

DESCRIPTION OF PROPOSAL: The proposed action is being conducted under the direction of the Washington Department of Ecology. There is an Agreed Order for the Model Toxics Control Act cleanup site known as the Weyerhaeuser Mill A Site (Ref No. 8979) and an Interim Action specific to this immediate project known as Interim Action No. 2.

Interim Action No. 2 will involve decommissioning existing Outfall 003, and installing new stormwater conveyance infrastructure and stormwater treatment at the South Terminal yard. New conveyance lines and an upsized catch basin (replacing an existing catch basin) from the existing oil/water separator adjacent to Outfall 003, will convey stormwater runoff to the existing central lift station. Force mains from each of the existing three lift stations will be intercepted near the discharge locations and new segments of force main will be extended to discharge to improved bioretention cells. Bioretention cells will be installed within the existing bioswale at the east side of the property. Portions of the existing swale will remain and will convey treated stormwater from the bioretention cells to two existing outfalls (outfall 001 and 004).

The footprint of the planned disturbed area for Interim Action No. 2 is approximately 0.35 acres. Approximately 2,000 cubic yards (CY) of material is anticipated to be excavated and sent off site for disposal. Excavated areas will be backfilled and restored using clean imported material (approximately 4,000 CY total), which will be tested for site contaminants prior to import. Existing paved surfaces disturbed because of this interim action will be restored in kind.

PROPONENT AND LEAD AGENCY: Port of Everett

LOCATION OF PROPOSAL: The Site is located at the Port of Everett along the southwestern area of the City of Everett Shoreline adjacent to the South and Pacific Terminals (NW quarter of Section 30 in Township 29 North, Range 5 East, and NE quarter of Section 25, Township 29 North, Range 4 East. The IA Area for which this checklist is written is depicted in **Figure 2**. The approximate street address is 3500 Terminal Avenue, Everett, Washington. The Interim Action No. 2 activities are located on Snohomish County Parcel Numbers 29053000201800 and 29042500400200.

DETERMINATION: The Lead Agency for this proposal has determined that this proposal, in conjunction with Best Management Practices (BMPs) and conservation measures, will not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21 and WAC 197-11. This determination assumes compliance with federal and State law as well as City of Everett ordinances related to general environmental protection. This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public upon request.

It is the policy of the Port that, when undertaking an action involving the exercise of substantive SEPA authority, the Port shall consider, as appropriate under the circumstances, the ramifications of such action as to one or more of the factors listed in Port of Everett Resolution 1046, Substantive Authority.

Mitigation Measures

Several measures are included in the proposed project design to avoid or minimize adverse environmental impacts. The Port will coordinate with local, state or federal agencies should they require additional mitigation measures. Best Management Practices (BMPs) will be employed during construction to avoid or minimize potential adverse impacts on the environment. Such BMPs include:

a. Containing stockpiles, use of silt fencing and straw wattles to minimize material loss.
b. All equipment will be inspected daily to ensure that it is in proper working condition.
c. BMPs for controlling potential sources of erosion and stormwater runoff will be implemented during construction. Standard BMPs that are both in accordance with the Washington State Stormwater Management Manual for Western Washington (SWMMWW) and City of Everett requirements would be implemented by the contractors during the proposed Interim Action No. 2. The existing stormwater system will be temporarily re-routed to facilitate construction within the IA Area.
d. The contractor will be responsible for the preparation and implementation of a Spill Prevention, Control, and Countermeasures (SPCC) plan. The SPCC plan will be submitted to the project engineer prior to the commencement of any construction activities. A copy of the plan with any updates will be maintained at the work site by the contractor. The contractor will also maintain at the job site the applicable equipment and materials designated in the SPCC plan.
e. The contractor will have a spill containment kit, including oil-absorbent materials, on-site to be used in the event of a spill if any oil product is observed.
f. Excess or waste materials, petroleum products, chemicals, or other toxic or deleterious materials will not be allowed to enter waters of the state.
g. Using only equipment and trucks that are maintained in good operational condition.
h. Requiring off-road equipment to have emission reduction equipment (e.g., requiring participation in Puget Sound Region Diesel Solutions, a program designed to reduce air pollution from diesel, by project sponsors and contractors).
i. Implementing restrictions on construction truck and other vehicle idling (e.g., limiting idling to a maximum of 5 minutes).
j. If necessary, spraying exposed soil with water or other suppressant to reduce windborne emissions of Particulate Matter (PM) and deposition of particulate matter.
k. Covering all trucks transporting materials, wetting materials in trucks, or providing adequate freeboard (space from the top of the material to the top of the truck bed sides), to reduce particulate matter emissions (dust) and deposition during transport.
l. Providing wheel washes, if necessary, to remove particulate matter that would otherwise be carried off site by vehicles to decrease deposition of particulate matter on area roadways.
m. Covering dirt, gravel, and debris piles, as needed, to reduce dust and wind-blown debris.
n. If necessary, staging transport of construction materials and contaminated soil to minimize overall transportation system congestion and delays to reduce regional emissions of pollutants.

Note: Issuance of this threshold determination does not constitute approval of local, state, and federal permits. Construction contractors shall comply with all applicable permit conditions.

This MDNS is issued under WAC 197-11-340(2) and WAC 197-11-350.

PUBLIC AND AGENCY COMMENT: The lead agency will not act on this proposal for 14 days from the published date below. Comments must be submitted in writing by **5:00 P.M. May 21, 2024** to the Responsible Official as named below. Comments will not otherwise be accepted by telephone or personal conversation. For general project related questions or additional information, please contact Laura M. Gurley, Planner, at 425-388-0720 or e-mail laurag@portofeverett.com.

Contact Person: Laura M. Gurley, Planner
Phone: (425) 388-0720

Responsible Official: John Klekotka, P.E.
Title: Chief of Engineering & Planning and SEPA Responsible Official
Address: Port of Everett
PO Box 538
Everett, Washington 98206
E-mail: **SEPAComments@portofeverett.com, subject line: "Mill A Interim Action No. 2"**

Signature: _____ Date: 5/3/24

Published on Port Website: May 7, 2024
Posted: May 7, 2024
Mailed: May 3, 2024

APPEALS: There is no administrative appeal for this determination per Port of Everett SEPA Resolution 1046.
Procedures for appeal of this SEPA threshold determination are set forth in Chapter 43.21C RCW including, without limitation, RCW 43.21C.060, 43.21C.075, and RCW 43.21C.080 and Chapter 197-11 WAC including, without limitation, WAC 197-11-680.

DATE: May 7, 2024

TO: Ryan Hardwick, Department of Ecology, Toxics Cleanup Program – Headquarters

FROM: Amy Hargrove, Department of Ecology, Toxics Cleanup Program – Headquarters

SUBJECT: Washington State Governor's Executive Order 21-02
Weyerhaeuser Mill A, FSID 1884322, CSID 2146
Department of Archeology and Historic Preservation (DAHP) Project # 2016-04-02460

Area of Potential Effect and Project Activities

The Washington State Department of Ecology (Ecology) is providing grant funding for an interim action at the Weyerhaeuser Mill A Site. The planned activities include decommissioning of a stormwater outfall and construction of a stormwater conveyance and bio-retention stormwater treatment cells within the bioswales. This will disturb soil from around 6700 sq ft with a maximum depth of 10 ft.

The project is located at 3500 Terminal Ave Everett, Snohomish County, parcel numbers 29053000203400, 29053000201800, 29042500400200, at T29, R04E and R05E, Sections 25 and 30. Project activities within the area include saw cutting, excavation/trenching, potholing, and backfilling along 3200 sq foot conveyance area to a maximum depth of 10 ft. Construction of bio-retention stormwater treatment cells within the footprint of the current bioswale that will include excavation and gradings over an area approximately 3500 square feet. The maximum depth in this area will be around 3 feet.

Final Determination

Ecology made a preliminary determination that the area is a **moderate risk** for pre-historic artifacts or other archaeological resources. Ecology recommended that an Inadvertent discovery plan (IDP) be required and to avoid cultural resource impacts an archeologist will be

on call when site work is being performed. The preliminary determination and request for consultation was sent via email to the following parties on March 25, 2024:

- David Witt, Department of Archaeological and Historic Preservation
- Kerry Lyste and Sam Barr, Stillaguamish Tribe of Indians
- Lena Tso, Lummi Nation
- Kevin Joseph, Sauk-Suiattle Tribe
- Stephanie Trudel, Suquamish Tribe
- Stephen Mullen-Moses and Adam Osbekoof, Snoqualmie Indian Tribe
- Josephine Jefferson, Swinomish Indian Tribal Community
- Richard Young, Tulalip Tribe

During consultation, Ecology received concurrence on our preliminary determination from the Suquamish Tribe and the Snoqualmie Tribe responded saying they had no substantive comments at this time.

Based on our review and comments received, Ecology retains the preliminary determination of **moderate risk** with the requirement of an inadvertent discovery plan (IDP) and an on-call archaeologist. The recipient must follow the IDP protocol in the event that archaeological deposits are inadvertently discovered during construction in any portion of the project area; ground-disturbing activities should be halted immediately in an area large enough to maintain integrity of the deposits. The DAHP, affected tribes, and Ecology must be notified.

Thank you for complying with the requirements of this cultural resources consultation.

Amy Hargrove,
amy.hargrove@ecy.wa.gov, 360-402-4217

EVERETT
WASHINGTON

July 12, 2024

Port of Everett
Attn: Laura Gurley, Planner
1205 Craftsman Way, Suite 200
Everett, WA 98201

Subject: Cleanup Action for Weyerhaeuser Mill A Interim Action 2

Dear Laura:

Thank you for providing notice and construction plans of the Port of Everett's plans to conduct an interim remedial cleanup and restoration action under the MTCA Agreed Order at the Weyerhaeuser Mill A site under the regulatory oversight of the Washington State Department of Ecology. We recognize that pursuant to Agreed Order No. DE 22405 and RCW 70.105D.090 (1), this work is exempt from the procedural requirements of any laws requiring or authorizing local government permits or approvals for the remedial action.

We support the Port of Everett's efforts to remediate the site and soils in a manner consistent with current Best Management Practices and all other applicable regulations.

Conditions of approval:

- A technical memo from a qualified engineer is needed to address the proximity to the geologic hazard area and that the proposal will have no/negligible impact.
- The project is deemed consistent with the Underground Utility Exemption in the city's stormwater standards based on the documents submitted. Changes to the project which create new infrastructure or hard surfaces may negate this exemption qualification and must be reviewed by the city prior to initiation. Under the exemption only Minimum Requirement #2 - Construction Stormwater Pollution Prevention Plan is required and no other mitigation requirements apply.
- A Construction Stormwater Water Pollution Prevention Plan (C-SWPPP) consistent with Minimum Requirement #2 and Volume II of the Stormwater Management Manual for Western Washington (2019 or 2024 version) must be prepared prior to beginning construction and implemented throughout the project. The Port has indicated that the C-SWPPP will be prepared by the project contractor once they are on-board. The C-SWPPP should be available for review by the city upon request at any point during the project.
- The project proposes to construct retrofit stormwater treatment BMPs. The city has reviewed the design for consistency with city construction standards and found them to be consistent with these standards.

PERMIT SERVICES

3200 Cedar Street
Everett, WA 98201

425.257.8810
425.257.8857 fax

everetteps@everettwa.gov
everettwa.gov/permits

However, as the facilities are not required under the city's stormwater requirements the specific sizing and a design of the facilities has not been reviewed. Note that this letter does not provide any assurance that the facilities will be acceptable to meet mitigation requirements of any future work outside of the current project scope. Inspection of bioretention facility by City will be required prior to their use as mitigation measures in future phases.

- As-builts of utility systems including stormwater BMPs will be required to be submitted to the PW Inspector per City Design and Construction Standards and Specifications for Development.
- A maintenance covenant is required for the new stormwater treatment facilities in accordance with Section 4-4.2(5) Criteria #6 of the city's Design and Construction Standards and Specifications. A template for the covenant can be found here: https://www.everettwa.gov/DocumentCenter/View/23448/Declaration-of-Covenant-for-Inspection-and-Maintenance-of-Stormwater-Facilities. The covenant must be recorded with the Snohomish County Auditor prior to close out of the project. A draft copy of the covenant should be provided for City review prior to recording.
- Stormwater or dewatering water discharge to sewer requires a discharge authorization permit. Contact Scott Hodgson, M&O Supervisor for details. (SHodgson@everettwa.gov, 425-257-8828)

Please feel free to contact me at SGood@everettwa.gov with any questions you may have.

Sincerely,

Sabrina Good

Sabrina Good, P.E.

Permit Services Manager | Everett Permit Services

CC: Kelsey Heyd, Planning Land Use Manager
Tony Lee, Building Official
Ryan Sass, Public Works Director
Heather Griffin, Surface Water Manager
Erik Emerson, Senior Engineer
Cindy Cullen, Associate Engineer, PE
Dana Zlateff, Surface Water Compliance Specialist

Appendix B
Interim Action Record Drawings

PORT OF EVERETT

MARINE TERMINALS STORMWATER IMPROVEMENTS

WEYERHAEUSER MILL-A INTERIM ACTION NO.2

COMMISSIONERS:
TOM STIGER
GLEN BACHMAN
DAVID SIMPSON

PORT STAFF:

LISA LEFEBER	CEO/EXECUTIVE DIRECTOR
CARL WOLLEBEK	CHIEF OPERATIONS OFFICER
WALTER SEIDL	MARINE TERMINALS DIRECTOR
JOHN KLEKOTKA, PE, SE	CHIEF OF ENGINEERING & CONSTRUCTION
JACOB KIRSCHNER	PROJECT MANAGER

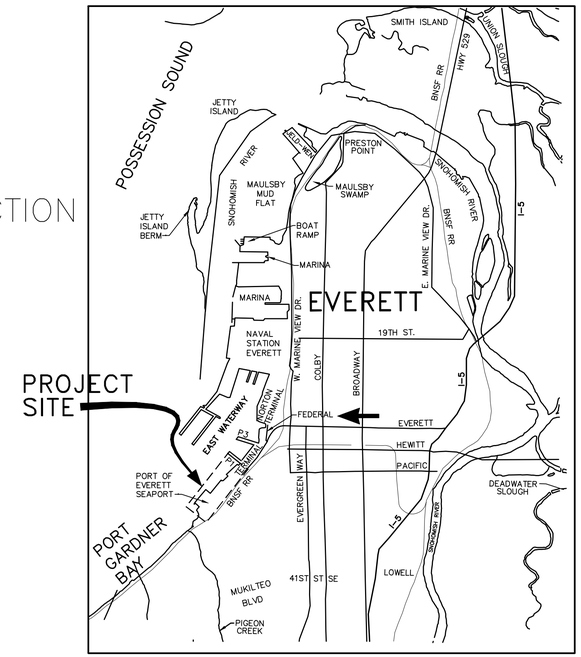
CONSULTING ENGINEERS:

KPFF CONSULTING ENGINEERS	CIVIL/STRUCTURAL
HERRERA	ENVIRONMENTAL

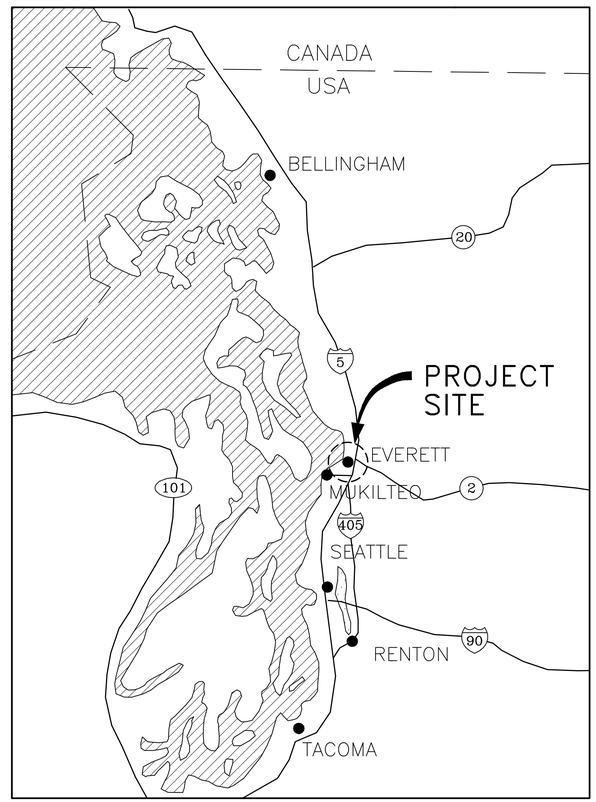
SITE ADDRESS:
2900 TERMINAL AVE
EVERETT, WA 98206

NAME OF OWNER/APPLICANT
PORT OF EVERETT

PARCEL TAX ID#:
29051900300100



VICINITY MAP
SCALE: NTS



LOCATION MAP
SCALE: NTS

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT
MARINE TERMINALS
STORMWATER IMPROVEMENTS

TITLE SHEET AND VICINITY MAP

DWG. NO. **G1.00**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 01 OF 42

RECORD DRAWING

DRAWING INDEX

SHEET NO.	DWG NO.	REV NO.	DRAWING TITLE
GENERAL			
01	G1.00	1	TITLE SHEET AND VICINITY MAP
02	G1.01	1	INDEX AND GENERAL NOTES
03	G1.02	1	EXISTING SITE MAP
04	G1.03	1	STANDARD ABBREVIATIONS AND REFERENCE SYMBOLS
05	G1.04	1	EXISTING DRAINAGE BASINS MAP
06	G1.05	1	SITE PLAN KEY MAP
CIVIL			
07	C1.00	1	GENERAL TESC NOTES
08	C1.01	1	TESC PLAN – ST–OF–03 TO ST–SDPS–02
09	C1.02	2	TESC PLAN – BIORETENTION TREATMENT 1–C
10	C1.03	2	TESC PLAN – BIORETENTION TREATMENT 1–B
11	C1.04	1	TESC PLAN – BIORETENTION TREATMENT 4–B
12	C1.20	1	TESC DETAILS
13	C2.00	1	SITE PREPARATION PLAN – ST–OF–03 TO ST–SDPS–02
14	C2.01	1	SITE PREPARATION PLAN – BIORETENTION TREATMENT 1–C
15	C2.02	1	SITE PREPARATION PLAN – BIORETENTION TREATMENT 1–B
16	C2.03	1	SITE PREPARATION PLAN – BIORETENTION TREATMENT 4–B
17	C2.10	1	SITE PREPARATION PHOTOS
18	C2.20	1	SITE PREPARATION DETAILS
19	C3.00	1	STORMWATER PLAN – ST–OF–03 TO ST–SDPS–02
20	C3.01	2	STORMWATER PLAN – BIORETENTION TREATMENT 1–C
21	C3.02	2	STORMWATER PLAN – BIORETENTION TREATMENT 1–B
22	C3.03	2	STORMWATER PLAN – BIORETENTION TREATMENT 4–B
23	C3.10	1	STORMWATER PROFILES
24	C3.20	1	STORMWATER DETAILS
25	C3.21	1	STORMWATER DETAILS
26	C3.22	2	FLOWSPLITTER DETAILS – BIORETENTION TREATMENT 1–C
27	C3.23	1	FLOWSPLITTER DETAILS – BIORETENTION TREATMENT 1–B
28	C3.24	2	FLOWSPLITTER DETAILS – BIORETENTION TREATMENT 4–B
29	C3.25	1	FLOWSPLITTER SECTIONS
30	C3.26	0	SLIP LINING DETAIL
31	C4.00	1	GRADING AND PAVING PLAN – ST–OF–03 TO ST–SDPS–02
32	C4.01	1	GRADING AND PAVING PLAN – BIORETENTION TREATMENT 1–C
33	C4.02	1	GRADING AND PAVING PLAN – BIORETENTION TREATMENT 1–B
34	C4.03	2	GRADING AND PAVING PLAN – BIORETENTION TREATMENT 4–B
35	C4.20	1	GRADING AND PAVING DETAILS
36	C5.00	0	TREATMENT SYSTEM – BIORETENTION 1–C
37	C5.01	0	TREATMENT SYSTEM – BIORETENTION 1–B
38	C5.02	0	TREATMENT SYSTEM – BIORETENTION 4–B
39	C5.20	0	BIORETENTION DETAILS 1
40	C5.21	0	BIORETENTION DETAILS 2
41	C5.22	0	BIORETENTION DETAILS 3
42	C5.23	0	RESTORATION DETAILS

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS AND THE CURRENT VERSION OF THE CITY OF EVERETT STANDARDS.
2. CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OR FABRICATION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE PLANS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE ENGINEER BEFORE PROCEEDING. DIMENSIONS AND CALLOUTS NOTED AS PLUS OR MINUS (±) OR (REF) INDICATE UNVERIFIED DIMENSIONS AND ARE APPROXIMATE. NOTIFY THE ENGINEER IMMEDIATELY OF CONFLICTS OR EXCESSIVE VARIATIONS FROM AS INDICATED. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS – DO NOT SCALE THE PLANS.
3. ALL LOCATIONS OF EXISTING STRUCTURES AND UTILITIES SHOWN HEREIN HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID OTHER UTILITIES NOT SHOWN HEREIN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL POTHOLE OR OTHERWISE CONFIRM EXISTING CONDITIONS, SPECIFICALLY PIPE SIZES PRIOR TO CONSTRUCTION, AND BRING ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND NEW WORK TO THE ENGINEER'S ATTENTION.

GENERAL NOTES (CONTINUED):

4. THE EXISTING SOUTH TERMINAL SITE UTILITIES HAVE UNDERGONE NUMEROUS REPAIR AND UPGRADE PROJECTS SINCE THE TIME OF THE ORIGINAL CONSTRUCTION. THESE REPAIRS MAY NOT ALL BE REFLECTED IN THESE CONTRACT DOCUMENTS. REFERENCE DRAWINGS FOR THESE CONTRACTS ARE AVAILABLE FROM THE PORT OF EVERETT. IT IS ANTICIPATED THAT MOST SITE UTILITIES WERE DEMOLISHED OR ABANDONED DURING DEMOLITION OF FORMER WEYERHAUSER MILL–A SITE.
5. A COPY OF THE PLANS SHALL BE ON–SITE WHENEVER CONSTRUCTION IS IN PROGRESS. THROUGHOUT THE PROGRESS OF THE WORK OF THIS CONTRACT, THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ALL CHANGES IN THE CONTRACT DOCUMENTS. UPON THE COMPLETION OF THIS CONTRACT, THE CONTRACTOR SHALL PROVIDE ONE COMPLETE SET OF CONTRACTOR REDLINE AS–BUILT TO THE PORT OF EVERETT.
6. THE CONTRACTOR SHALL LOCATE ALL UTILITIES WITHIN THE PROJECT SITE PRIOR TO WORK. CONTRACTOR SHALL CONTACT 811 "CALL BEFORE YOU DIG" AND AN INDEPENDENT LOCATING SERVICE TO LOCATE ALL UTILITIES AT LEAST 48 HOURS PRIOR TO WORK.
7. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES AND OTHER FEATURES THAT MAY IMPACT THE WORK. CONTRACTOR SHALL BRING ANY CONFLICTS TO THE ENGINEER'S ATTENTION PRIOR TO BEGINNING AFFECTED WORK.
8. ANY DAMAGE TO EXISTING UTILITIES, OTHER FACILITIES OR EQUIPMENT DUE TO THE CONTRACTOR'S NEGLIGENCE, EXCEPT FOR ITEMS DESIGNATED FOR DEMOLITION, SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE. THIS INCLUDES ITEMS OUTSIDE THE WORK AREA AND WITHIN THE PORT OF EVERETT PROPERTY THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES DURING EXECUTION OF THIS CONTRACT.
9. ALL ACTIVATION AND DEACTIVATION OF UTILITIES SHALL BE COORDINATED WITH THE UTILITY AND THE ENGINEER IN ADVANCE. PROVIDE A MINIMUM OF 3 DAYS ADVANCE WRITTEN NOTICE TO THE UTILITY AND ENGINEER.
10. SHORING AND EXCAVATION SHALL BE IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
11. THE CONTRACTOR SHALL KEEP ALL STREETS, TERMINALS, AND VEHICULAR TRAFFIC AREAS USED FOR THIS WORK CLEAN AT ALL TIMES, SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
12. CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROLS REQUIRED DURING THE DURATION OF THIS PROJECT, PER CONTRACTOR'S OPERATION. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND COORDINATED WITH THE PORT OF EVERETT.
13. CONTRACTOR SHALL BE AWARE OF FACILITY OPERATION REQUIREMENTS AND SHALL COORDINATE ACCESS TO THE SITE WITH THE ENGINEER. CONTRACTOR SHALL MAINTAIN ADJACENT TENANT ACCESS AT ALL TIMES AND SHALL NOT RESTRICT OPERATIONS WITHOUT APPROVAL OF THE ENGINEER.
14. THE CONTRACTOR SHALL PLACE CONSTRUCTION DEBRIS CONTROL DEVICES, BOOMS, TARPAULINS AND OTHER DEVICES AS NECESSARY TO PREVENT DEBRIS FROM ENTERING THE WATER, AND AIR BORNE MATERIALS FROM LEAVING THE IMMEDIATE VICINITY OF THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ANY MATERIALS DEPOSITED OUTSIDE THE WORK AREA.
15. MAINTAIN UTILITY SERVICE TO EXISTING BUILDINGS, UTILITIES AND FIRE HYDRANTS DURING CONSTRUCTION UNLESS NOTED OTHERWISE OR APPROVED BY THE ENGINEER. INSTALL NEW UTILITY LINES TO POINTS OF CONNECTION TO EXISTING UTILITY LINE PRIOR TO DEMOLITION OF THE EXISTING LINES, UNLESS NOTED OTHERWISE. WATER SERVICE SHUTDOWNS WILL BE LIMITED TO 2 HOURS FOR EACH UTILITY CROSSOVER AND SHALL BE COORDINATED WITH THE ENGINEER. POWER AND COMMUNICATION SHUTDOWNS SHALL BE LIMITED AND SHALL BE COORDINATED WITH THE ENGINEER. SEE SPECIFICATIONS FOR FURTHER SHUTDOWN REQUIREMENTS.
16. CONTRACTOR–INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE PORT FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
17. THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO PREVENT INTERRUPTION OF OPERATIONS AND PROTECT ALL EXISTING SURFACES/STRUCTURES TO REMAIN AT THE FACILITY DURING CONSTRUCTION. DETAILS SHALL BE PRESENTED IN THE CONTRACTOR'S WORK PLAN.
18. PROJECT NORTH AS INDICATED ON THESE DRAWINGS IS FOR CONVERSATIONAL GENERAL DIRECTIONAL REFERENCE. BEARINGS NOTES ON DRAWINGS ARE RELATIVE TO TRUE NORTH.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION STABILITY AND TEMPORARY SUPPORT AS NECESSARY. DETAILED CONSTRUCTION PLANS SHALL BE PREPARED BY THE CONTRACTOR AND APPROVED BY THE PORT PRIOR TO MOBILIZATION.
20. SOUTH TERMINAL MILL–A SITE IS ON THE WASHINGTON STATE DEPARTMENT OF ECOLOGY LIST OF CONTAMINATED SITES AND IS CURRENTLY IN THE MTCA CLEANUP PROCESS. REFER TO THE SPECIFICATIONS AND INTERIM ACTION WORK PLAN (IAWP) IN THE APPENDICES OF THE CONTRACT DOCUMENT FOR MORE INFORMATION.
21. SEE SHEET G1.03 FOR UNDERGROUND STRUCTURE LOADING CRITERIA REQUIREMENTS.

GENERAL NOTES (CONTINUED):

22. THIS WORK OCCURS WITHIN A FEDERALLY SECURED SITE WHERE A TRANSPORTATION WORKER IDENTIFICATION CARD (TWIC) IS REQUIRED AT ALL TIMES. TWIC HOLDERS MAY BE TRAINED AS ESCORTS BY THE PORT. SECURITY REQUIREMENTS AND REGULATIONS MUST BE FOLLOWED THROUGHOUT THE PROJECT. THIS WILL REQUIRE COORDINATION WITH SECURITY STAFF. ACCESS IN AND OUT OF THE TERMINALS IS REGULATED BY SECURITY STAFF.
23. A PORTION OF THE WORK IS LOCATED NEAR AND ON PUBLIC TRAILS. PUBLIC TRAILS WILL BE CLOSED DURING ACTIVE CONSTRUCTION HOURS. CONTRACTOR SHALL RE–OPEN TRAILS FOR PUBLIC ACCESS AFTER CONSTRUCTION EACH WORK DAY AND FOR HOLIDAYS, INCLUDING WEEKENDS. SEE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLANS.

STORMWATER BASIS OF DESIGN GENERAL NOTES:

1. ALL RUNOFF FROM THE PROJECT SITE AREA DISCHARGES TO POSSESSION SOUND, A SALTWATER RECEIVING WATERBODY.
2. THE PROJECT IS SUBJECT TO THE SWMMWW I–3.4 MINIMUM REQUIREMENTS 1–5 AS DETAILED BELOW
   - I–3.4.1 PREPARATION OF STORMWATER SITE PLANS
   - I–3.4.2 CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN
   - I–3.4.3 SOURCE CONTROL OF POLLUTION
   - I–3.4.4 PRESERVATION OF NATURAL DRAINAGE SYSTEMS AND OUTFALLS
   - I–3.4.5 ONSITE STORMWATER MANAGEMENT
3. THE PROJECT IS FLOW CONTROL EXEMPT AND WILL COMPLY WITH I–3.4.5 VIA LIST 3 TO THE MAXIMUM EXTENT PRACTICABLE:
   - A. LAWN AND LANDSCAPED AREAS WILL BE TREATED WITH BMP T5.13 POST CONSTRUCTION SOIL QUALITY AND DEPTH.
   - B. ROOFS ARE NOT A PART OF THE PROJECT AND NO STORMWATER MANAGEMENT FOR ROOFS IS PROPOSED.
   - C. OTHER HARD SURFACES WILL MAINTAIN THEIR CURRENT DRAINAGE PATTERN. THERE IS NO VEGETATED FLOWPATH SUITABLE FOR DISPERSION BMPS.
4. WQ FLOW RATES SHOWN ARE MODELED WITH WWHM2012.
5. FLOW SPLITTER WATER QUALITY VOLUMETRIC CALCULATIONS ARE MODELED WITH AUTODESK STORM AND SANITARY ANALYSIS UTILIZING WQ FLOW RATES FROM NOTE 3 AND EXISTING PUMP INFORMATION.

UNDERGROUND UTILITY STRUCTURES DESIGN LOADING CRITERIA

1. ALL UNDERGROUND AND AT GRADE STRUCTURES INCLUDING MANHOLES, CATCH BASINS, HAND HOLES, VAULTS, CLEANOUTS AND OTHER STRUCTURES, INCLUDING ALL RINGS, COVERS, HATCHES, GRATES AND OTHER FEATURES WHICH MAY APPLY, SHALL BE CONTRACTOR DESIGNED. ALL VAULTS SHALL BE CONTRACTOR DESIGNED TO WITHSTAND LOADING CRITERIA FOR THE TAYLOR "BIG RED" THDC–976 CONTAINER HANDLER SHOWN ON THIS SHEET UNLESS NOTED OTHERWISE. STRUCTURES LOCATED WITHIN THE BIOFILTRATION SWALE AREA (OUTSIDE OF PORT SECURITY FENCE) SHALL BE CONTRACTOR DESIGNED TO WITHSTAND LOADING CRITERIA FOR HS–20, UNLESS NOTED OTHERWISE.
2. LID CASTING AND FRAME SHALL BE 200 KIP PROOF TEST LOAD RATED PER AASHTO M306.
3. CONTRACTOR SHALL SUBMIT STAMPED AND SIGNED SHOP DRAWINGS AND CALCULATIONS COMPLETED BY A WASHINGTON STATE REGISTERED STRUCTURAL ENGINEER FOR APPROVAL BY THE ENGINEER PRIOR TO FABRICATION OF ALL UNDERGROUND UTILITY STRUCTURES. SHOP DRAWINGS AND CALCULATIONS PROVIDED BY THE CONTRACTOR SHALL ADDRESS BUOYANCY AND SOIL BEARING PRESSURE.
4. STANDARD PLAN REFERENCES AND MANUFACTURER MODEL NUMBERS FOR UNDERGROUND UTILITY STRUCTURES ARE INTENDED TO PROVIDE INTERIOR GEOMETRY AND INTENT ONLY. THE CONTRACTOR SHALL INCREASE REQUIRED REINFORCING AND WALL THICKNESS, AND CHANGE ACCESS GRATE AND COVER AS REQUIRED TO ACCOMMODATE LOADING CRITERIA REQUIREMENTS.
5. REFER TO THE GEOTECHNICAL ENGINEERING DESIGN REPORT DATED DECEMBER 6TH, 2017 PREPARED BY HART CROWSER AND GEOTECHNICAL MEMORANDUM HALEY ALRICH FOR SOIL DESIGN CRITERIA TO BE APPLIED TO VAULT DESIGN.
6. DEAD LOAD SHALL BE APPLIED TO ALL STRUCTURES, WHICH INCLUDES THE WEIGHT OF THE CONSTRUCTION MATERIALS AND THE SOIL.
7. LIVE LOADS SHALL BE APPLIED TO ALL STRUCTURES TO ACT SIMULTANEOUSLY AND IN COMBINATION WITH DEAD LOADS, SOIL LOADS AND HYDROSTATIC PRESSURE.

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259–3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

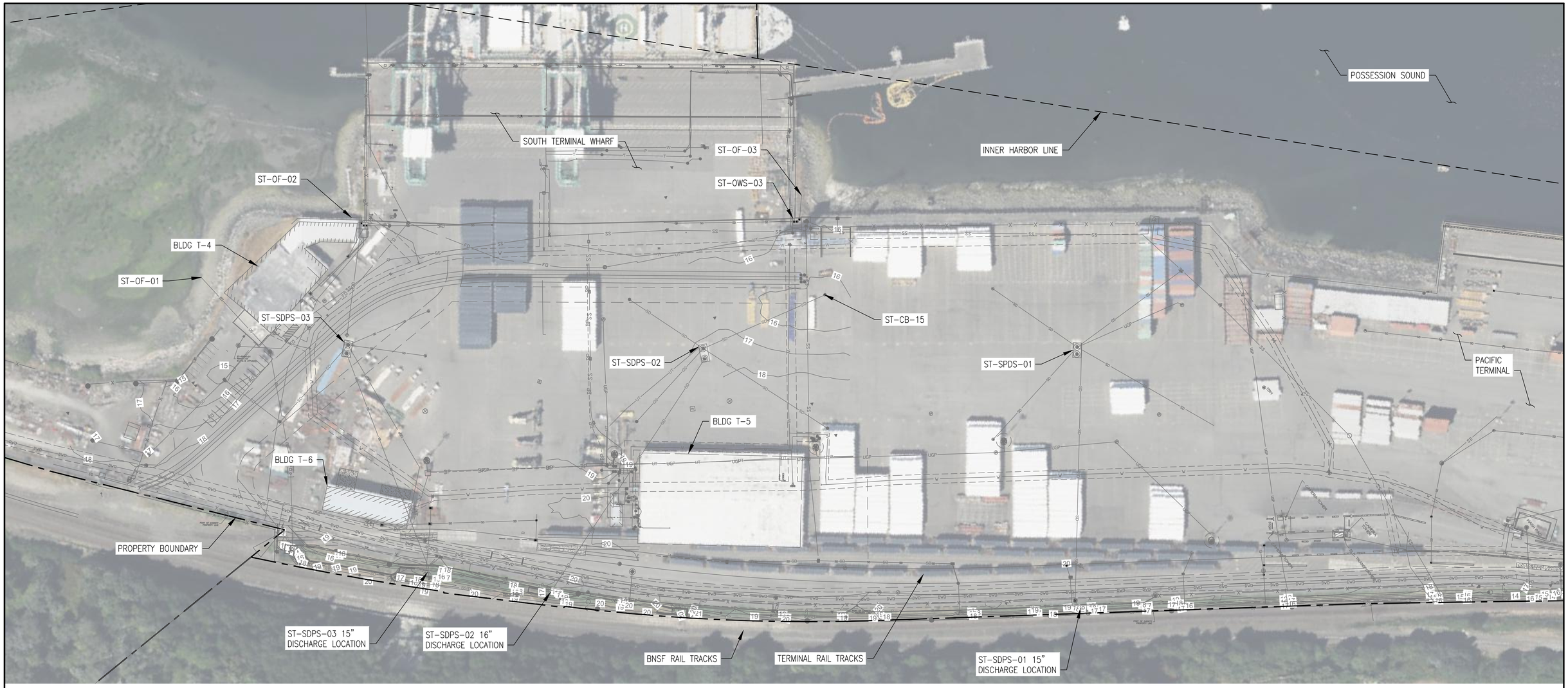
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT
MARINE TERMINALS
STORMWATER IMPROVEMENTS

INDEX AND GENERAL NOTES

DWG. NO. **G1.01**
CIP NO. 1–0–060–01
PROJECT NO. MT–ST–2024–03
SHEET NO. 02 OF 42

RECORD DRAWING



LEGEND

PROPERTY BOUNDARY

INNER HARBOR LINE

EXISTING SITE MAP

SCALE: 1" = 80'

PROJECT NORTH

80' 0 80' 160'

40' 120'

SCALE: 1"=80'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS

EXISTING SITE MAP

DWG. NO. **G1.02**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 03 OF 42

RECORD DRAWING

ABBREVIATIONS

ASPH	ASPHALT CONCRETE
ACP	ASPHALT CONCRETE PAVEMENT
APPROX	APPROXIMATE
AVE	AVENUE
AVG	AVERAGE
BGS	BELOW GROUND SURFACE
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
BOT	BOTTOM
BP	BURIED POWER
CAP	CAPACITY
CB	CATCH BASIN
CEM	CEMENT
CG	CLEAR AND GRUB
CI	CAST IRON
CL	CENTERLINE
CLF	CHAIN LINK FENCE
CLR	CLEARANCE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COE	CITY OF EVERETT
COMM	COMMUNICATION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCT
CONT	CONTINUOUS
CONT'D	CONTINUED
CP	CONCRETE PIPE, CONTROL POINT
CPSSP	CORRUGATED POLYETHYLENE STORM SEWER PIPE
CSBC	CRUSHED SURFACING BASE COURSE
CSFM	CITY SANITARY FORCE MAIN
CSL	CROSSHOLE SONIC LOGGING
CSO	COMBINED SEWER OVERFLOW
CSTC	CRUSHED SURFACING TOP COURSE
CTR	CENTER
CW	CONCRETE WALK
DEA	DAVID EVANS & ASSOCIATES
DEMO	DEMOLITION
DI	DUCTILE IRON
DIA, DIAM	DIAMETER
DR	DRIVE
DWG	DRAWING
DWO	DEEP WATER OUTFALL
E	EAST, EASTING
EA	EACH
EG	EXISTING GRADE
EHW	EXTREME HIGH WATER
ELEC	ELECTRICAL
EL, ELEV	ELEVATION
ELW	EXTREME LOW WATER
EV	ELECTRICAL VAULT
EX, EXIST	EXISTING
FDN	FOUNDATION
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FO	FIBER OPTIC
FT	FEET/FOOT
G	GAS
GALV	GALVANIZED
GS	GROUND SURFACE
GV	GATE VALVE
HAZMAT	HAZARDOUS MATERIALS
HDPE	HIGH DENSITY POLYETHYLENE
HTL	HIGH TIDE LINE
HMA	HOT MIX ASPHALT
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
IE	INVERT ELEVATION
IN	INCH/INCHES
K	KIPS
KLF	KIPS PER LINEAL FOOT
L	LENGTH
LF	LINEAR FEET
LT	LEFT
LOC	LOCATION
MAX	MAXIMUM
ME	MATCH EXISTING
MH	MANHOLE
MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER

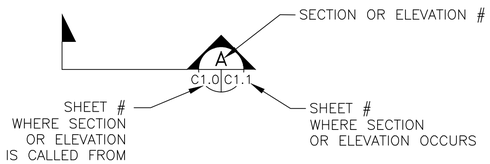
ABBREVIATIONS (CONTINUED)

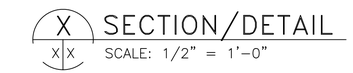
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MLW	MEAN LOW WATER
MSRC	MARINE SPILL RESPONSE CORPORATION
MTCA	MODEL TOXICS CONTROL ACT
MW	MONITORING WELL
N	NORTH/NORTHING
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NT	NORTON TERMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OF	OUTFALL
OHW	ORDINARY HIGH WATER
OWS	OIL WATER SEPARATOR
P	POWER
POE	PORT OF EVERETT
PP	POWER POLE
PRV	PRESSURE REDUCING VALVE
PSE	PUGET SOUND ENERGY
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QTY	QUANTITY
REF	REFERENCE DIMENSION
REINF	REINFORCEMENT
REQ'D	REQUIRED
REV	REVISION
RD	ROAD
R.O.W.	RIGHT-OF-WAY
RPBA	REDUCED PRESSURE BACKFLOW ASSEMBLY
RT	RIGHT
RW	RETAINING WALL
S	SOUTH, SLOPE
SCH	SCHEDULE
SD	STORM DRAIN
SDFM	STORM DRAIN FORCE MAIN
SDMH	STORM DRAIN MANHOLE
SDPS	STORM DRAIN PUMP STATION
SF	STORM FILTER
SIM	SIMILAR
SNO PUD	SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT
SOW	SCOPE OF WORK
SPEC	SPECIFICATION
SR	STATE ROUTE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
ST	STREET, SOUTH TERMINAL
STA	STATION
STD	STANDARD
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
T	TELECOMMUNICATION UTILITY
TB	THRUST BLOCK
TC	TOP OF CONCRETE
TD	TRENCH DRAIN
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
U	UNKNOWN UTILITY
UGP	UNDERGROUND POWER
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WATER
W/	WITH
W/O	WITHOUT
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WSE	WATER SURFACE ELEVATION
WM	WATER MAIN
WS	WATERSIDE
WQ	WATER QUALITY
WWHM	WESTERN WASHINGTON HYDROLOGY MODEL

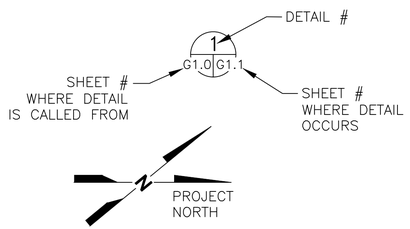
LEGEND:

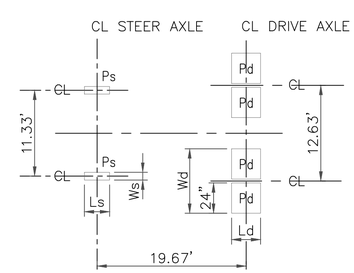
- BORE HOLE
- MONITORING WELL
- WATER VALVE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- TELEPHONE RISER
- GUY ANCHOR
- ELECTRIC METER
- EXISTING FLOW DIRECTION
- PROPOSED FLOW DIRECTION
- FIRE HYDRANT
- LIGHT POLE
- EXISTING CONTOUR
- EXISTING EASEMENT
- EXISTING FENCE
- EXISTING OVERHEAD POWER LINE (OP)
- EXISTING SANITARY SEWER LINE (SS)
- EXISTING WATER LINE (W)
- EXISTING STORM DRAIN (SD)
- EXISTING TELEPHONE LINE (T)
- WATER LINE (W)
- FENCE

REFERENCE SYMBOLS:









Ps = 16K
(INCLUDES 10% IMPACT)
Ws = 20"
Ls = 6.1"
qs = 131 psi

Pd = 65k
(INCLUDES 10% IMPACT)
Wd = 51"
Ld = 23"
qd = 112 psi

TAYLOR "BIG RED" THDC-976 CONTAINER HANDLER

NOTE:
CONTAINER HANDLING REACH STACKERS CURRENTLY USED ON SITE ARE HYSTER RS46-36CH AND LINDE C4535TLS. THE TAYLOR THPC-976 LOADING WILL GOVERN OVER THE HYSTER AND LINDE LOADING.

FENCED AREA LOADING REQUIREMENT

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

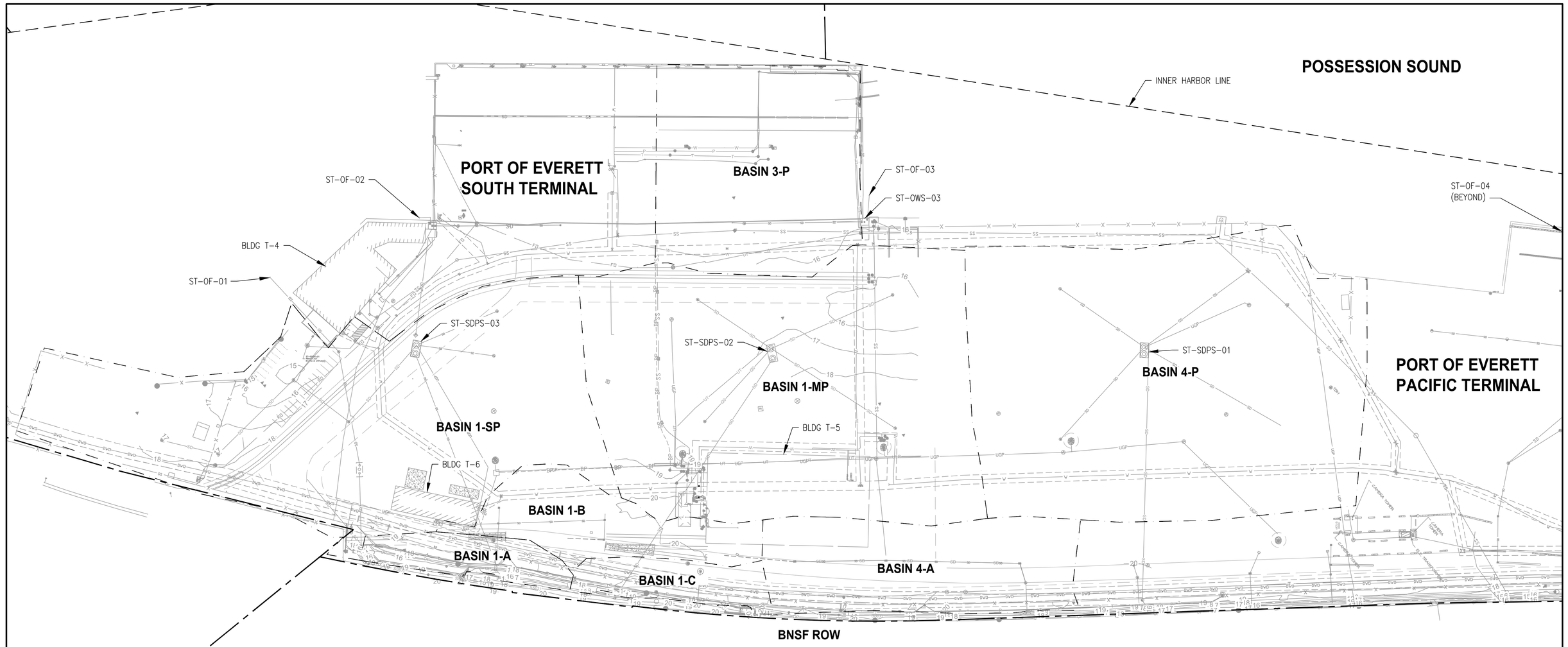
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
STANDARD ABBREVIATIONS AND REFERENCE SYMBOLS

DWG. NO. **G1.03**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 04 OF 42

RECORD DRAWING



LEGEND

- PROPERTY BOUNDARY
- BASIN DELINEATION
- INNER HARBOR LINE

EXISTING DRAINAGE BASINS

SCALE: 1" = 80'

PROJECT NORTH

80' 0 80' 160'

40' 120'

SCALE: 1"=80'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
EXISTING DRAINAGE
BASINS MAP

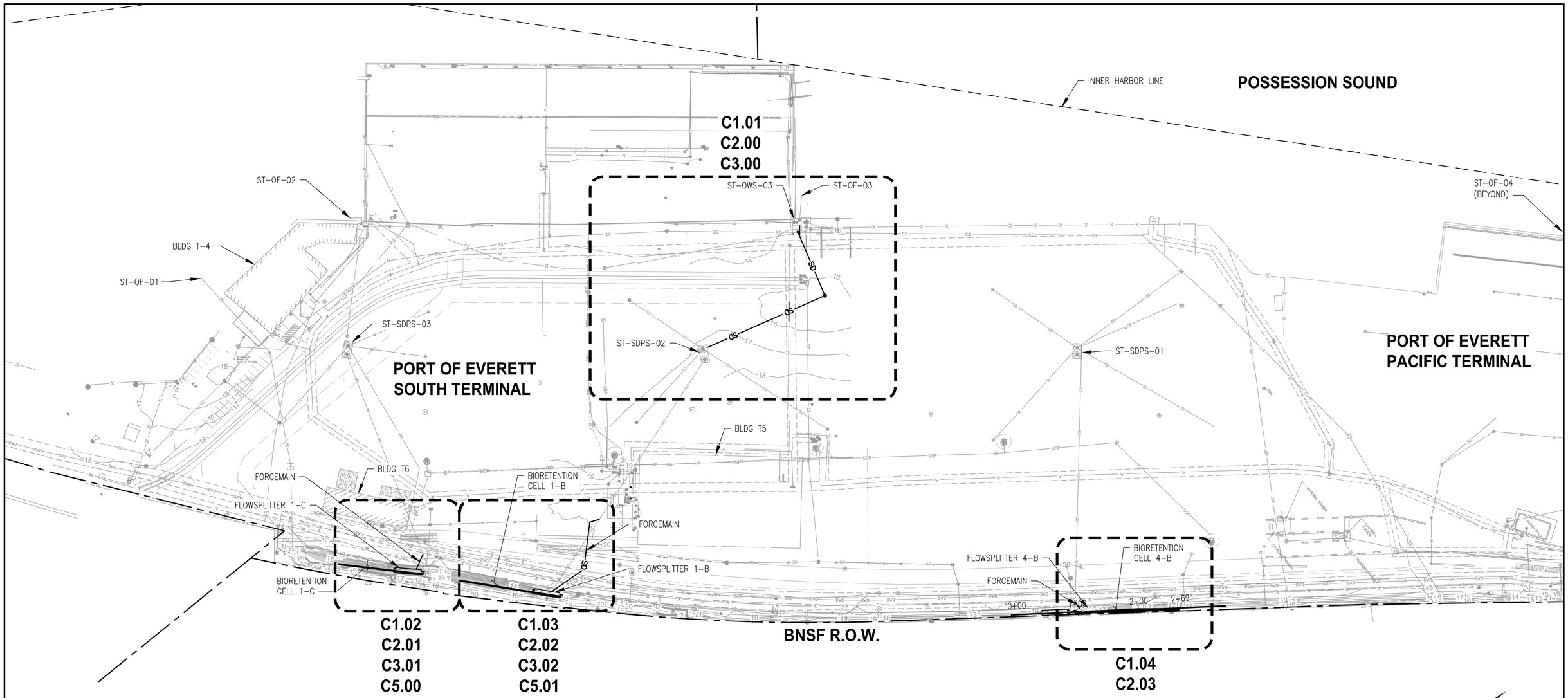
DWG. NO. **G1.04**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 05 OF 42

RECORD DRAWING



LEGEND

- PROPERTY BOUNDARY
- INNER HARBOR LINE
- SD — STORM DRAIN

SITE PLAN

SCALE: 1" = 80'

PROJECT NORTH

80' 0 80' 160'

40' 120'

SCALE: 1"=80'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
SITE PLAN
KEY MAP

DWG. NO. **G1.05**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 06 OF 42

RECORD DRAWING

TESC GENERAL NOTES:

1. THIS PROJECT DOES NOT REQUIRE COVERAGE UNDER THE WASHINGTON STATE CONSTRUCTION STORMWATER GENERAL PERMIT UNLESS AS REQUESTED BY DEPARTMENT OF ECOLOGY PER CONSTRUCTION STORMWATER GENERAL PERMIT SECTION S1.B.1.b.

2. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS ANTICIPATED FOR SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT LEAVE THE PROJECT WORK AREA LIMITS.

3. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.

4. CONTRACTOR SHALL SUBMIT A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS REQUIRED PER THE SPECIFICATIONS. CONSTRUCTION EROSION CONTROL MEASURES MUST BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITIES.

5. IF CONSTRUCTION OCCURS DURING DRY WEATHER PERIODS, DUST FROM CONSTRUCTION SHALL BE MINIMIZED THROUGH USE OF BEST MANAGEMENT PRACTICES (BMPS) OUTLINED IN THE CITY OF EVERETT STANDARD SPECIFICATIONS.

6. THE TESC FACILITIES SHOWN ON THIS PLAN SHALL BE CONSTRUCTED IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE PORT DRAINAGE SYSTEM, OR VIOLATE APPLICABLE WATER QUALITY STANDARDS.

7. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTION.

8. NON-COMPLIANCE WITH THE EROSION CONTROL AND WATER QUALITY REQUIREMENTS MAY RESULT IN A TEMPORARY STOP-WORK ORDER AT THE CONTRACTORS EXPENSE, UNTIL SAID EROSION CONTROL MEASURES ARE FUNCTIONAL.

9. THE CONTRACTOR SHALL REMOVE MATERIAL DROPPED, WASHED OR TRACKED FROM VEHICLES OUTSIDE OF THE DESIGNATED PROJECT WORK AREA LIMITS OR INTO THE EXISTING STORM DRAINAGE SYSTEM. DEBRIS SHALL NOT BE WASHED INTO THE STORM DRAINAGE SYSTEM.

10. ALL EXISTING STORM DRAIN INLETS INSIDE AND OUTSIDE OF PROJECT WORK AREA THAT RECEIVE STORM WATER RUNOFF FROM DISTURBED AREAS OF THE SITE SHALL HAVE STORM DRAIN INLET PROTECTION IN CONFORMANCE WITH CITY OF EVERETT STANDARD DRAWING 210. COORDINATE ACCESS OUTSIDE OF WORK AREA LIMITS WITH THE PORT.

11. PERFORM PAVEMENT SAWCUTTING IN CONFORMANCE WITH DOE BMP C152.

12. CONCRETE HANDLING AND pH CONTROL OF STORMWATER SHALL BE PERFORMED IN CONFORMANCE WITH DOE BMP C151, C152, AND C153.

13. THE PROJECT SITE IS LOCATED WITHIN A WASHINGTON STATE DEPARTMENT OF ECOLOGY LIST OF CONTAMINATED SITES AND IS CURRENTLY IN THE MTCA CLEANUP PROCESS. REFER TO THE INTERIM ACTION WORK PLAN IN APPENDIX A OF THE SPECIFICATIONS FOR DEWATERING, SITE EXCAVATION, AND IMPORT MATERIAL REQUIREMENTS.

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

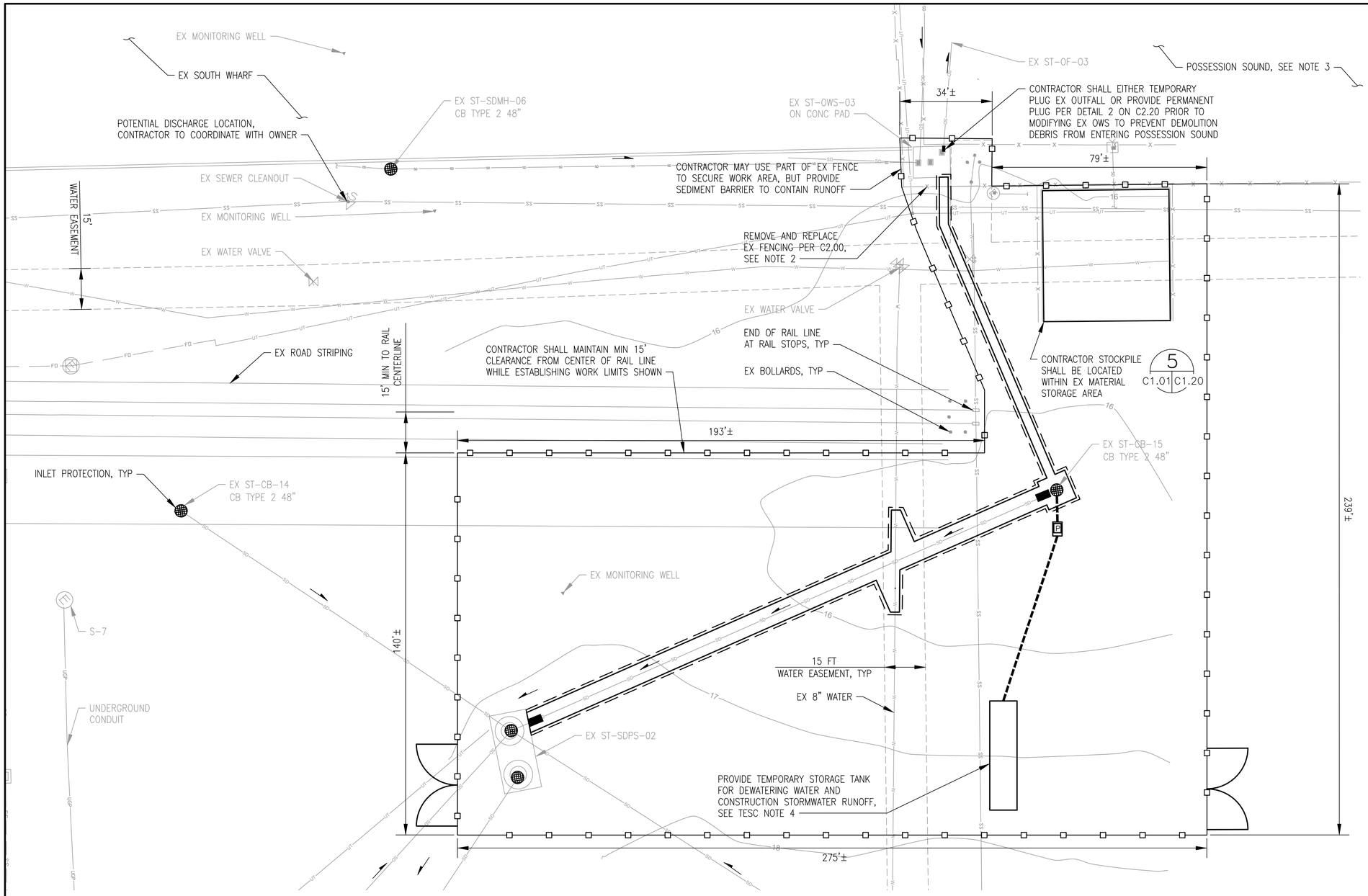
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT
MARINE TERMINALS
STORMWATER IMPROVEMENTS

GENERAL TESC NOTES

DWG. NO. **C1.00**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 07 OF 42

RECORD DRAWING



TESC PLAN – ST-OF-03 TO ST-SDPS-02

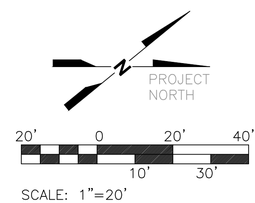
SCALE: 1" = 20'

TESC NOTES

1. CONSTRUCTION SURFACE RUNOFF GENERATED FROM THE WORK AREAS SHALL BE CONTAINED. RUNOFF MAY BE DISCHARGED IF WATER TURBIDITY IS BELOW 25 AND PH IS WITHIN 6.5–8.5 STANDARD UNIT.
2. PROVIDE FENCING TO KEEP SITE SECURE AT ALL TIMES.
3. CONTRACTOR SHALL NOT PERFORM ANY WORK BELOW MEAN HIGHER HIGH WATER. ALL WORK SHALL BE PERFORMED IN THE UPLAND AREA. IN-WATER WORK IS PROHIBITED.
4. SURFACE WATER AND GROUND WATER THAT COMES IN CONTACT WITH EXISTING SOIL WITHIN THE YARD AREA SHALL BE TREATED AS PROCESSED WATER AND HAULED OFFSITE OR DISCHARGED TO SANITARY SEWER WITH APPROVAL FROM COE, SEE SPECIFICATION.

LEGEND

- FULL DEPTH SAWCUT LIMIT, SEE C4.00 TO C4.03 — 1 C1.01 C4.20
- LAP PAVEMENT SAWCUT LIMIT — 1 C1.01 C4.20
- CONSTRUCTION FENCE WORK LIMIT — 1 C1.01 C1.20
- TEMPORARY PIPE PLUG
- CONSTRUCTION DEWATERING SYSTEM
- STORMWATER INLET PROTECTION — 2 C1.01 C1.20
- FLOW DIRECTION
- CONSTRUCTION SITE ENTRANCE



SCALE: 1"=20'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
PO BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
TESC PLAN
ST-OF-03 TO ST-SDPS-02

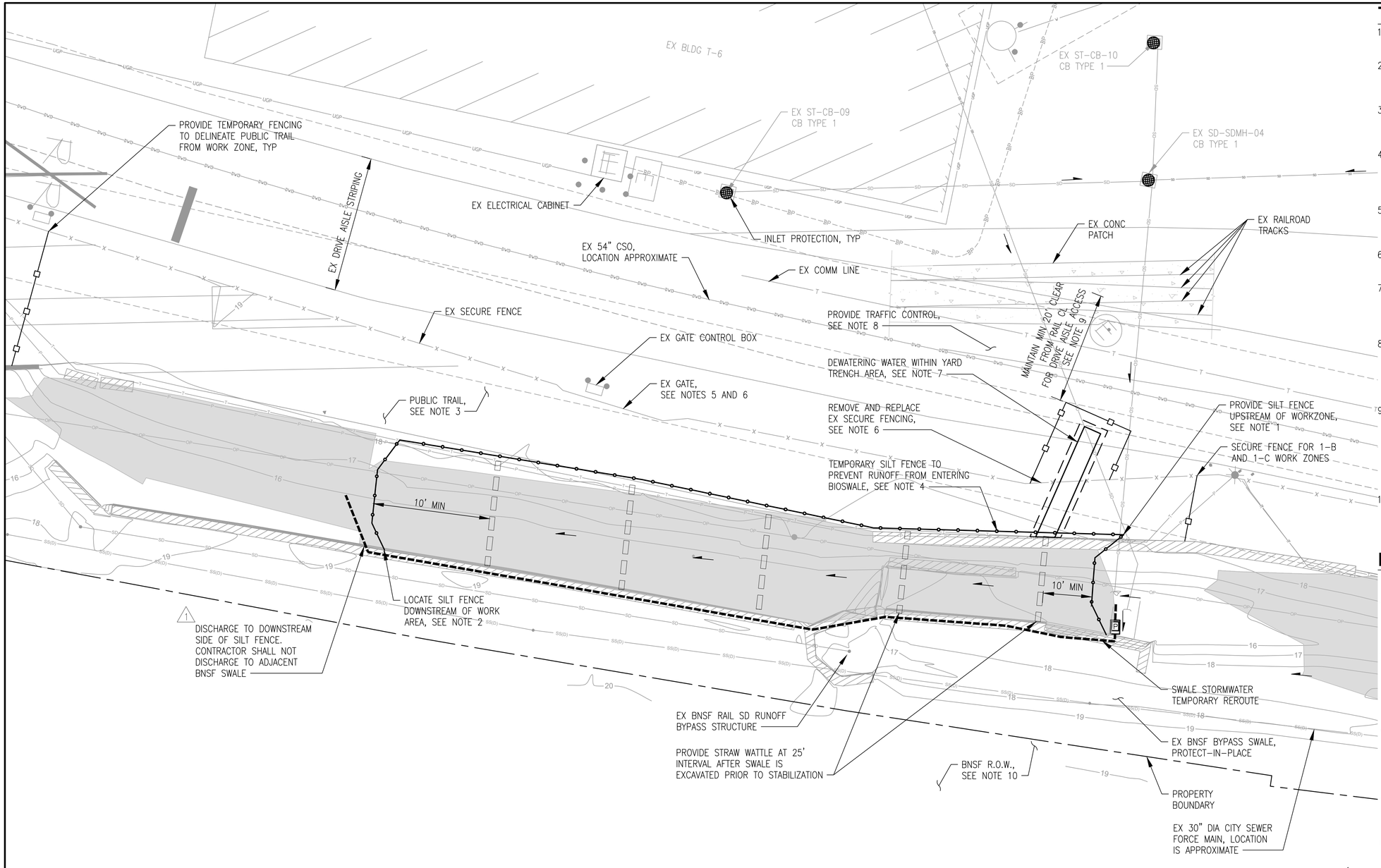
DWG. NO. **C1.01**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 08 OF 42

RECORD DRAWING



TESC PLAN – BIORETENTION TREATMENT 1-C

SCALE: 1" = 10'

TESC NOTES

1. CONTRACTOR SHALL HAVE STANDBY PUMP READILY AVAILABLE TO BYPASS UPSTREAM SWALES RUNOFF PRIOR TO NEW CULVERT INSTALLATION.
2. CONSTRUCTION SURFACE RUNOFF GENERATED FROM THE WORK AREAS SHALL BE MANAGED PER LOCAL, STATE AND FEDERAL REGULATION ON CONSTRUCTION STORMWATER MANAGEMENT.
3. CONTRACTOR SHALL COORDINATE TRAIL CLOSURE MONDAY THROUGH FRIDAY WITH PORT STAFF. CONTRACTOR SHALL ENSURE WORK ZONE IS SAFE FOR PUBLIC ACCESS SATURDAY AND SUNDAY.
4. IF CONSTRUCTION IS PERFORMED IN RAIN SEASON, CONTRACTOR SHALL PLAN TO REROUTE EXISTING FORCEMAIN TO DIVERT RUNOFF FROM WORK AREAS. CONTRACTOR SHALL COORDINATE WITH PORT PRIOR TO SHUTTING DOWN ANY EXISTING LIFT STATIONS.
5. CONTRACTOR SHALL USE EXISTING TERMINAL GATES TO ACCESS BIORETENTION TREATMENT CELL WORK AREA. CONTRACTOR SHALL COORDINATE ACCESS WITH OWNER.
6. PROVIDE FENCING TO KEEP SITE SECURE AT ALL TIMES. SEE C2.01 FOR FENCE REMOVAL.
7. SURFACE WATER AND GROUND WATER THAT COMES IN CONTACT WITH EXISTING SOIL WITHIN THE YARD AREA SHALL BE TREATED AS PROCESSED WATER AND HAULED OFFSITE OR DISCHARGED TO SANITARY SEWER WITH APPROVAL FROM COE.
8. CONTRACTOR SHALL PROVIDE FLAGGER OR TEMPORARY TRAFFIC CONTROL AT ALL TIMES WHEN THE DRIVE AISLE IS REDUCED TO ONE LANE. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN AND COORDINATE WITH ENGINEERS AND OWNERS AT LEAST 2 WEEKS PRIOR TO ANY LANE CLOSURE.
9. PHASE THE SECURE FENCING AND TRENCH EXCAVATION TO ALLOW FOR TRAFFIC TO PASS THROUGH THE DRIVE AISLE. CONTRACTOR SHALL BACKFILL AND PAVE NON-FENCED AREA AT THE END OF THE WORK SHIFT, UNLESS ANCHORED METAL PLATES ARE PROVIDED FOR TEMPORARY VEHICLE ACCESS. CONTRACTOR SHALL PROVIDE FLAGGER OR TEMPORARY TRAFFIC CONTROL AT ALL TIMES WHEN DRIVE AISLE IS SHUT DOWN TO ONE LANE.
10. CONTRACTOR SHALL STAY CLEAR FROM BNSF RAIL AREA AT ALL TIMES. CONTRACTOR SHALL NOT PLACE ANY CONSTRUCTION EQUIPMENT/STOCKPILE/MATERIALS 15' WITHIN CENTER LINE OF BNSF TRACK OR OUTSIDE OF PORT PROPERTY LINE, WHICHEVER IS CLOSER.

LEGEND

- PROPERTY BOUNDARY
- FULL DEPTH SAWCUT LIMIT SEE C4.00 TO C4.03 — 2 | C1.02 | C4.20
- LAP PAVEMENT SAWCUT LIMIT — 2 | C1.02 | C4.20
- CONSTRUCTION FENCE WORK LIMIT — 1 | C1.02 | C1.20
- PUMPED TEMPORARY STORMWATER REROUTE
- STORMWATER INLET PROTECTION — 2 | C1.02 | C1.20
- SILT FENCE — 4 | C1.02 | C1.20
- STRAW WATTLE — 3 | C1.02 | C1.20
- FLOW DIRECTION

PROJECT NORTH

10' 0 10' 20'
10' 15'
SCALE: 1"=10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
2	03/14/2025	NAW	RECORD DRAWING
1	07/08/2024	ECN	COE SUBSTANTIVE REVIEW COMMENT
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

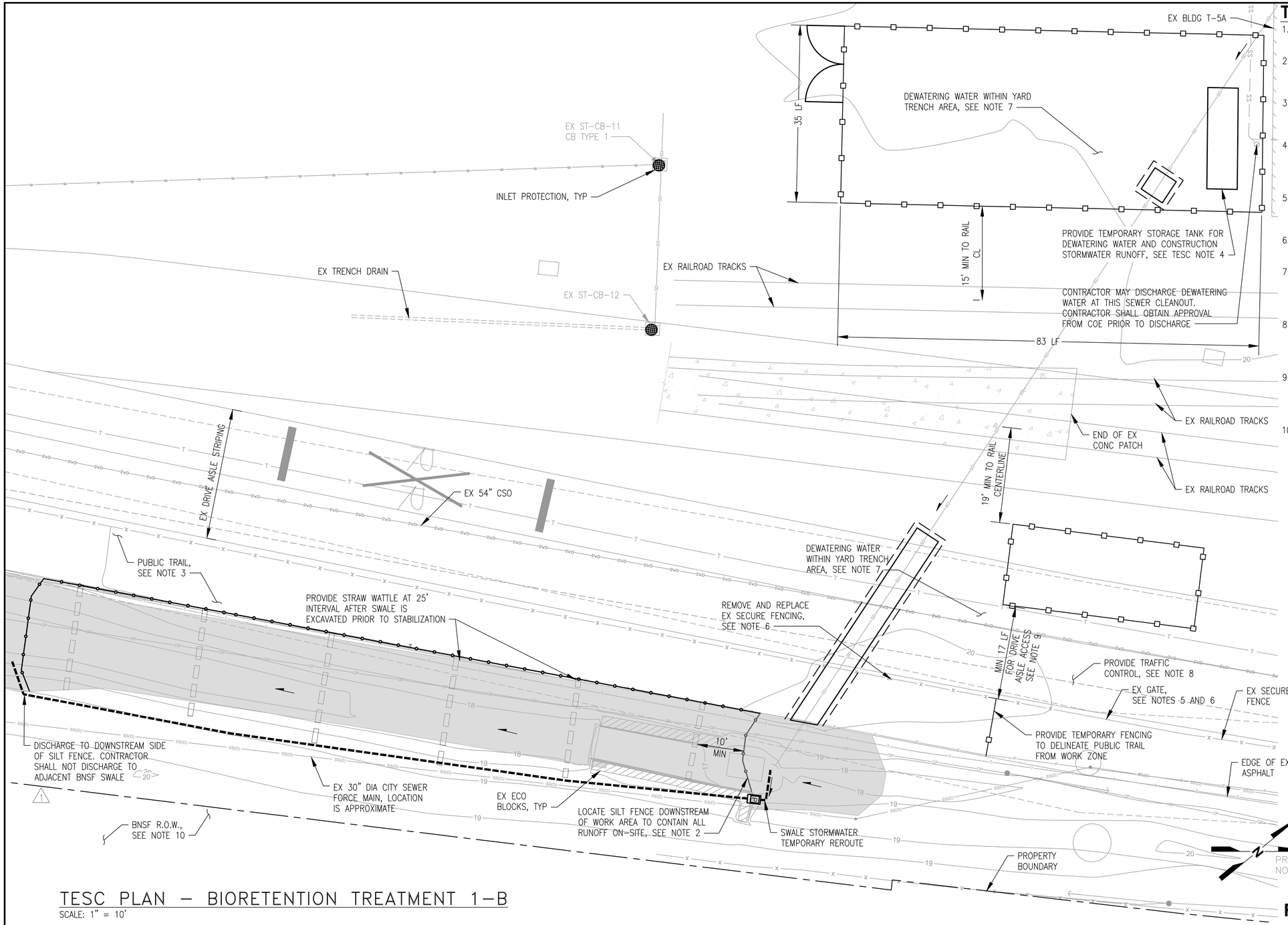
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
TESC PLAN
BIORETENTION TREATMENT 1-C

DWG. NO. **C1.02**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 09 OF 42

RECORD DRAWING



TESC PLAN – BIORETENTION TREATMENT 1-B

SCALE: 1" = 10'

TESC NOTES

1. CONTRACTOR SHALL HAVE STANDBY PUMP READILY AVAILABLE TO BYPASS UPSTREAM SWALES RUNOFF PRIOR TO NEW CULVERT INSTALLATION.
2. CONSTRUCTION SURFACE RUNOFF GENERATED FROM THE WORK AREAS SHALL BE MANAGED PER LOCAL, STATE AND FEDERAL REGULATION ON CONSTRUCTION STORMWATER MANAGEMENT.
3. CONTRACTOR SHALL COORDINATE TRAIL CLOSURE MONDAY THROUGH FRIDAY WITH PORT STAFF. CONTRACTOR SHALL ENSURE WORK ZONE IS SAFE FOR PUBLIC ACCESS SATURDAY AND SUNDAY.
4. IF CONSTRUCTION IS PERFORMED IN RAIN SEASON, CONTRACTOR SHALL PLAN TO REROUTE EX FORCEMAIN TO DIVERT RUNOFF FROM WORK AREAS. CONTRACTOR SHALL COORDINATE WITH PORT PRIOR TO SHUTTING DOWN ANY EX LIFT STATIONS.
5. CONTRACTOR SHALL USE EXISTING TERMINAL GATES TO ACCESS BIORETENTION TREATMENT CELL WORK AREA. CONTRACTOR SHALL COORDINATE ACCESS WITH OWNER.
6. PROVIDE FENCING TO KEEP SITE SECURE AT ALL TIMES. SEE C2.02 FOR FENCE REMOVAL.
7. SURFACE WATER AND GROUND WATER THAT COMES IN CONTACT WITH EXISTING SOIL WITHIN THE YARD AREA SHALL BE TREATED AS PROCESSED WATER AND HAULED OFFSITE OR DISCHARGED TO SANITARY SEWER WITH APPROVAL FROM COE.
8. CONTRACTOR SHALL PROVIDE FLAGGER OR TEMPORARY TRAFFIC CONTROL AT ALL TIMES WHEN DRIVE AISLE IS REDUCED TO ONE LANE. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN AND COORDINATE WITH ENGINEERS AND OWNERS AT LEAST 2 WEEKS PRIOR TO ANY LANE CLOSURE.
9. PHASE THE SECURE FENCING AND TRENCH EXCAVATION TO ALLOW FOR TRAFFIC TO PASS THROUGH THE DRIVE AISLE. CONTRACTOR SHALL BACKFILL AND PAVE NON-FENCED AREA AT THE END OF THE WORK SHIFT, UNLESS ANCHORED METAL PLATES ARE PROVIDED FOR TEMPORARY VEHICLE ACCESS.
10. CONTRACTOR SHALL STAY CLEAR FROM BNSF RAIL AREA AT ALL TIMES. CONTRACTOR SHALL NOT PLACE ANY CONSTRUCTION EQUIPMENT/STOCKPILE/MATERIALS 15' WITHIN CENTER LINE OF BNSF TRACK OR OUTSIDE OF PORT PROPERTY LINE, WHICHEVER IS CLOSER.

LEGEND

- PROPERTY BOUNDARY
- FULL DEPTH SAWCUT LIMIT SEE C4.00 TO C4.03 — 2 C1.03 C4.20
- LAP PAVEMENT SAWCUT LIMIT — 2 C1.03 C4.20
- CONSTRUCTION FENCE WORK LIMIT — 1 C1.03 C1.20
- PUMPED TEMPORARY STORMWATER REROUTE
- SD CONSTRUCTION DEWATERING SYSTEM
- STORMWATER INLET PROTECTION — 2 C1.03 C1.20
- SILT FENCE — 4 C1.03 C1.20
- STRAW WATTLE — 3 C1.03 C1.20
- FLOW DIRECTION
- CONSTRUCTION SITE ENTRANCE

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of Everett
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
2	03/14/2025	NAW	RECORD DRAWING
1	07/08/2024	ECN	COE SUBSTANTIVE REVIEW COMMENT
0	05/24/2024	NAW	BID SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

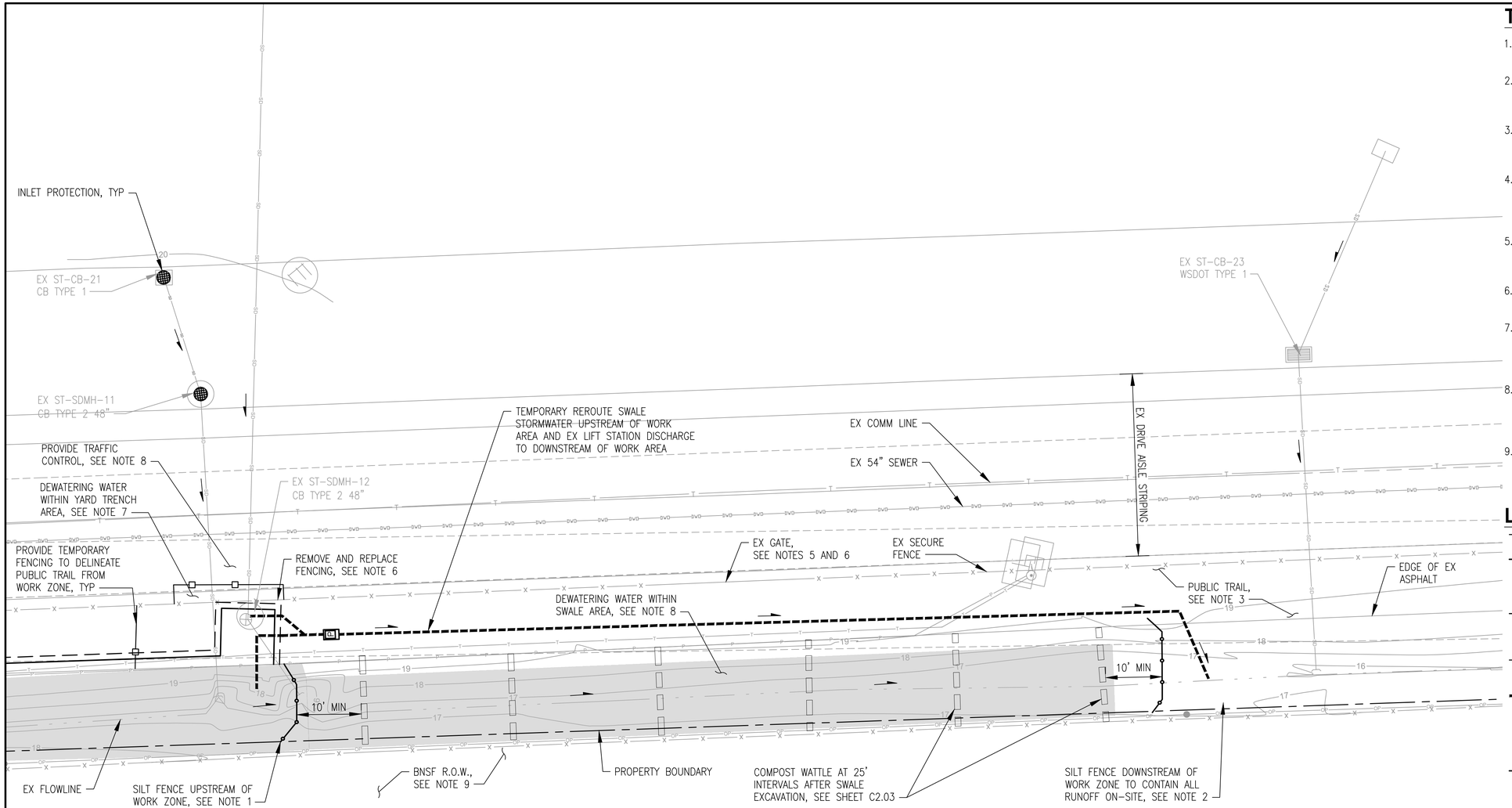
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
TESC PLAN
BIORETENTION TREATMENT 1-B

DWG. NO. **C1.03**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 10 OF 42

RECORD DRAWING



TESC PLAN – BIORETENTION TREATMENT 1-A

SCALE: 1" = 10'

TESC NOTES

1. CONTRACTOR SHALL HAVE STANDBY PUMP READILY AVAILABLE TO BYPASS UPSTREAM SWALES RUNOFF PRIOR TO NEW CULVERT INSTALLATION.
2. CONSTRUCTION SURFACE RUNOFF GENERATED FROM THE WORK AREAS SHALL BE MANAGED PER LOCAL, STATE AND FEDERAL REGULATION ON CONSTRUCTION STORMWATER MANAGEMENT.
3. CONTRACTOR SHALL COORDINATE TRAIL CLOSURE MONDAY THROUGH FRIDAY WITH PORT STAFF. CONTRACTOR SHALL ENSURE WORK ZONE IS SAFE FOR PUBLIC ACCESS SATURDAY AND SUNDAY.
4. IF CONSTRUCTION IS PERFORMED IN RAIN SEASON, CONTRACTOR SHALL PLAN TO REROUTE EX FORCEMAIN TO DIVERT RUNOFF FROM WORK AREAS. CONTRACTOR SHALL COORDINATE WITH PORT PRIOR TO SHUTTING DOWN ANY EX LIFT STATIONS.
5. CONTRACTOR SHALL USE EXISTING TERMINAL GATES TO ACCESS BIORETENTION TREATMENT CELL WORK AREA. CONTRACTOR SHALL COORDINATE ACCESS WITH OWNER.
6. PROVIDE FENCING TO KEEP SITE SECURE AT ALL TIMES. SEE C2.03 FOR FENCE REMOVAL.
7. SURFACE WATER AND GROUND WATER THAT COMES IN CONTACT WITH EXISTING SOIL WITHIN THE YARD AREA SHALL BE TREATED AS PROCESSED WATER AND HAULED OFFSITE OR DISCHARGED TO SANITARY SEWER WITH APPROVAL FROM COE.
8. CONTRACTOR SHALL PROVIDE FLAGGER OR TEMPORARY TRAFFIC CONTROL AT ALL TIMES WHEN DRIVE AISLE IS SHUT DOWN TO ONE LANE. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN AND COORDINATE WITH ENGINEERS AND OWNERS AT LEAST 2 WEEKS IN ADVANCE PRIOR TO ANY LANE CLOSURE.
9. CONTRACTOR SHALL STAY CLEAR FROM BNSF RAIL AREA AT ALL TIMES. CONTRACTOR SHALL NOT PLACE ANY CONSTRUCTION EQUIPMENT/STOCKPILE/MATERIALS 15' WITHIN CENTER LINE OF BNSF TRACK OR OUTSIDE OF PORT PROPERTY LINE, WHICHEVER IS CLOSER.

LEGEND

- PROPERTY BOUNDARY
- FULL DEPTH SAWCUT LIMIT SEE C4.00 TO C4.03 — 2 / C1.04 | C4.20
- 3" DEPTH LAP PAVEMENT SAWCUT LIMIT — 2 / C1.04 | C4.20
- CONSTRUCTION FENCE WORK LIMIT — 1 / C1.04 | C1.20
- PUMPED TEMPORARY STORMWATER REROUTE
- STORMWATER INLET PROTECTION — 2 / C1.04 | C1.20
- SILT FENCE — 4 / C1.04 | C1.20
- STRAW WATTLE — 3 / C1.04 | C1.20
- FLOW DIRECTION
- CONSTRUCTION SITE ENTRANCE

PROJECT NORTH

10' 0 10' 20'

5' 15'

SCALE: 1"=10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
TESC PLAN
BIORETENTION TREATMENT 4-B

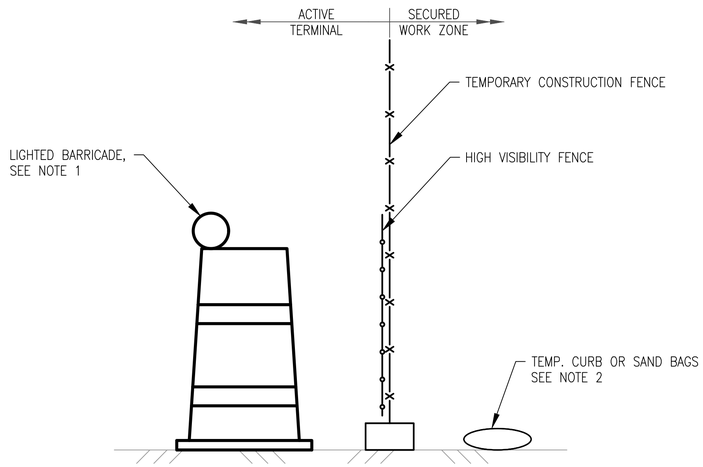
DWG. NO. **C1.04**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 11 OF 42

RECORD DRAWING

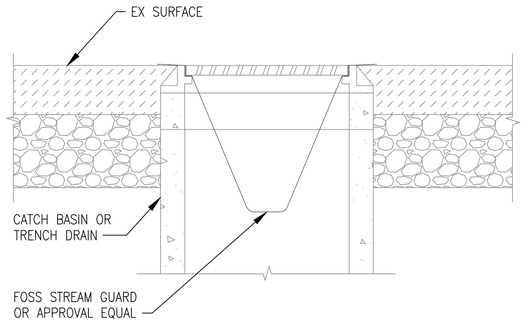


NOTES:

1. PROVIDE LIGHTED BARRICADES SPACED EVERY 20 FEET AROUND THE WORK ZONE.
2. PROVIDE TEMPORARY CURB OR SAND BAGS TO PREVENT SURFACE FLOW FROM

1 CONSTRUCTION FENCE WORK LIMIT DETAIL

C1.01, C1.02, C1.03, C1.04, C1.20 SCALE: NTS

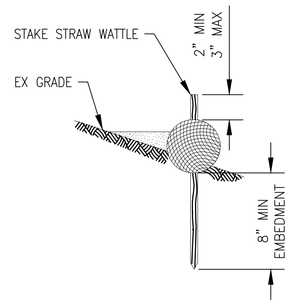


NOTES:

1. INSTALL INLET PROTECTION IN ACCORDANCE WITH COE STANDARD DRAWING #210.

2 INLET PROTECTION

C1.01, C1.02, C1.03, C1.04, C1.20 SCALE: NTS

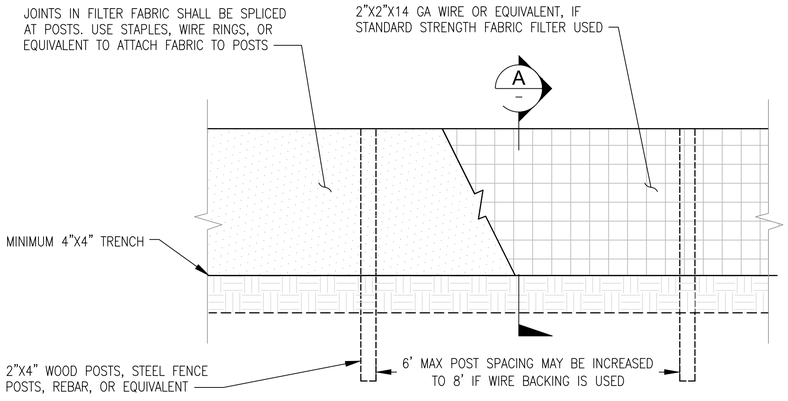


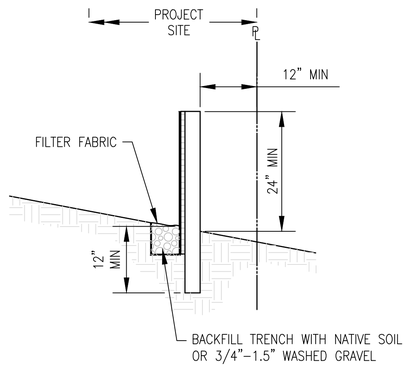
NOTES:

1. INSTALL AND STAKE STRAW WATTLES IN ACCORDANCE WITH COE STANDARD DESIGN AND CONSTRUCTION STANDARDS.

3 STRAW WATTLE

C1.02, C1.03, C1.04, C1.20 SCALE: NTS





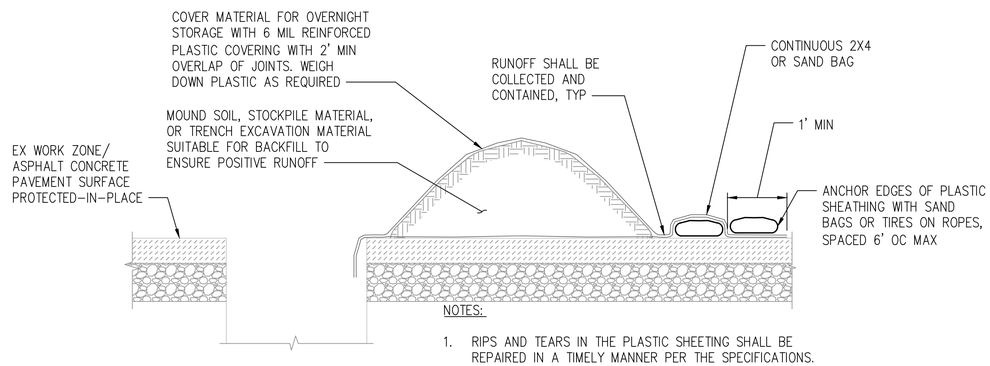
SECTION A

NOTES:

1. INSTALL TEMPORARY SILT FENCE IN ACCORDING WITH COE STANDARD DRAWING #214.

4 SILT FENCE

C1.02, C1.03, C1.04, C1.20 SCALE: NTS



NOTES:

1. RIPS AND TEARS IN THE PLASTIC SHEETING SHALL BE REPAIRED IN A TIMELY MANNER PER THE SPECIFICATIONS.
2. SOIL, STOCKPILE MATERIAL, AND TRENCH EXCAVATION MATERIAL SUITABLE FOR BACKFILL SHALL BE STOCKPILED AT NO MORE THAN 1 TO 1 SLOPE AND THE TOE OF THE STOCKPILE SHALL BE NO CLOSER THAN 2' FROM THE EDGE OF EXCAVATION. STOCKPILES HEIGHT SHALL NOT EXCEED 10'.

5 STOCKPILE DETAIL

C1.01, C1.20 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
TESC
DETAILS

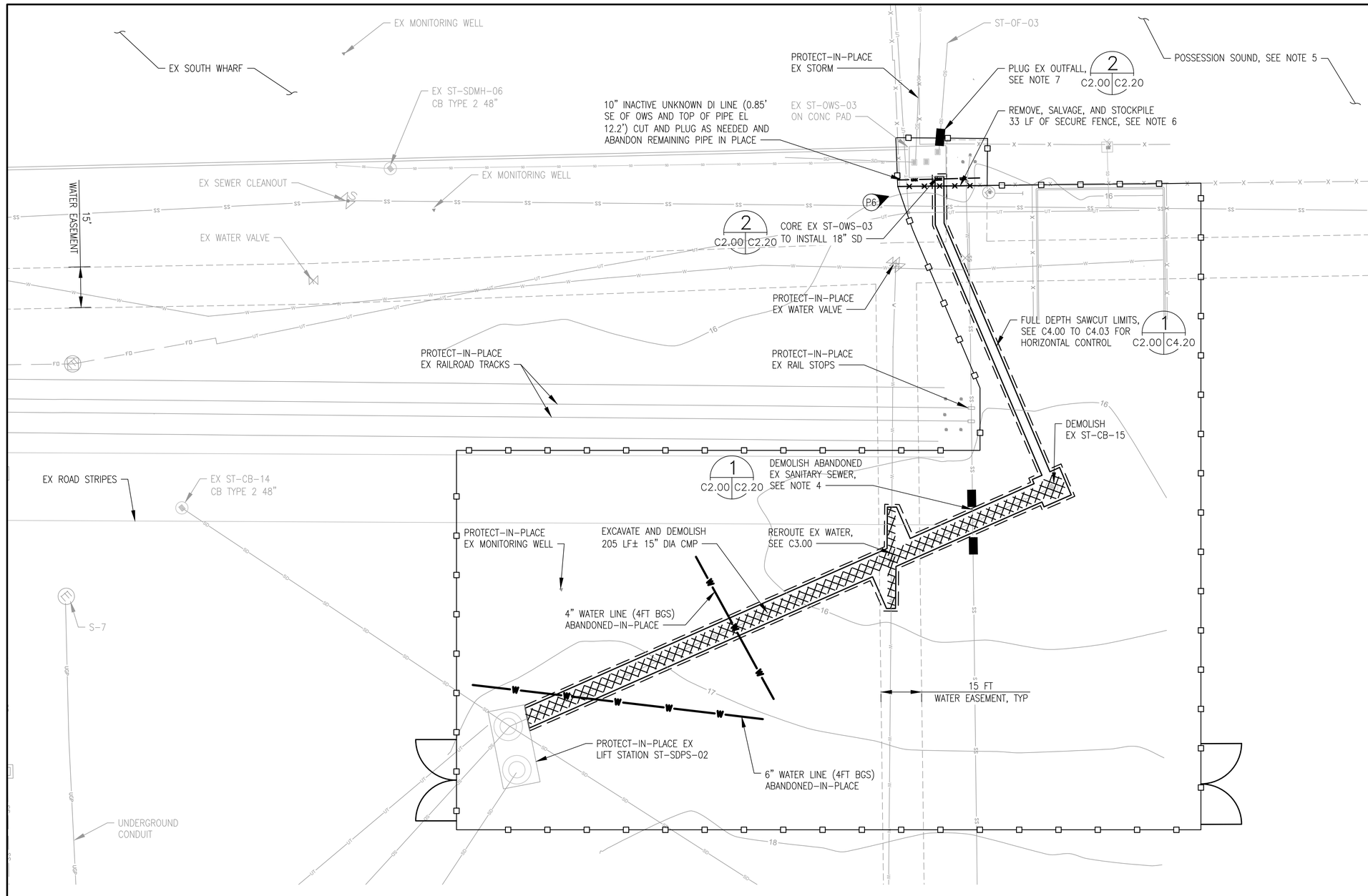
DWG. NO. **C1.20**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 12 OF 42

RECORD DRAWING



SITE PREPARATION PLAN – ST-OF-03 TO ST-SDPS-02

SCALE: 1" = 20'

NOTES

1. INSTALL TESC MEASURES PRIOR TO FULL DEPTH PAVEMENT DEMOLITION AND EXCAVATION.
2. PAVEMENT BEYOND THE LIMITS DEFINED IN THE GRADING AND PAVING PLAN DAMAGED AS A RESULT OF CONTRACTOR OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE
3. UNLESS OTHERWISE NOTED, ALL DEMOLISHED MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF AT AN APPROVED DISPOSAL FACILITY OFF OF PORT PROPERTY.
4. CONTRACTOR MAY DEMO EXISTING ABANDONED SANITARY SEWER AS NEEDED TO INSTALL NEW 36" STORM DRAIN PER C3.0. CONTRACTOR SHALL PROVIDE PIPE PLUG PER DETAIL 1 OF C2.20 TO ALL CUT ABANDONED SANITARY SEWER PIPES.
5. CONTRACTOR SHALL NOT PERFORM ANY WORK BELOW MEAN HIGHER HIGH WATER. ALL WORK SHALL BE PERFORMED IN THE UPLAND AREA. IN-WATER WORK IS PROHIBITED.
6. CONTRACTOR TO RE-INSTALL SECURE FENCE TO MATCH PRE-CONSTRUCTION CONDITIONS ONCE WORK IS COMPLETE.
7. INSTALL NEW SD PIPE PRIOR TO PLUGGING OUTFALL. ONCE OUTFALL IS PLUGGED, CONTRACTOR SHALL IMMEDIATELY CONNECT NEW SD PIPE TO OWS STRUCTURE TO MINIMIZE FLOODING.

LEGEND

- FULL DEPTH SAWCUT LIMIT SEE C4.00 TO C4.03 (1 / C2.00 C4.20)
- LAP PAVEMENT SAWCUT LIMIT (1 / C2.00 C4.20)
- FENCE DEMOLITION
- DEMOLITION ITEM
- UTILITY PIPE PLUG
- PROJECT WORK LIMITS
- DEMO PHOTO, SEE C2.10 (PX)
- CONSTRUCTION SITE ENTRANCE

PROJECT NORTH

20' 0 20' 40'
10' 30'

SCALE: 1"=20'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
PO BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

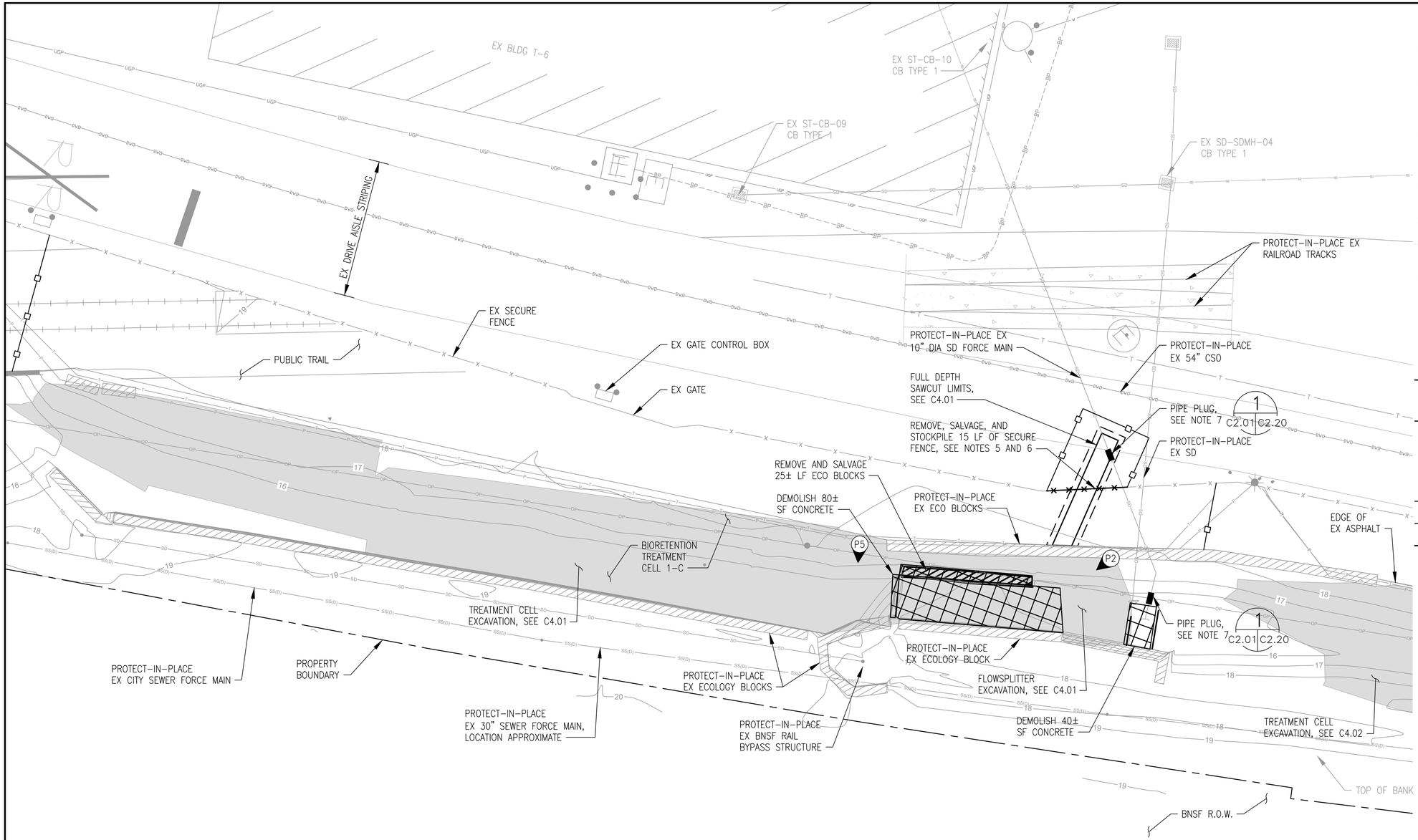
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
SITE PREPARATION PLAN
ST-OF-03 TO ST-SDPS-02

DWG. NO. **C2.00**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 13 OF 42

RECORD DRAWING



NOTES

1. INSTALL TESC MEASURES BEFORE PAVEMENT REMOVAL AND EXCAVATION.
2. PAVEMENT BEYOND THE LIMITS DEFINED IN THE GRADING AND PAVING PLAN DAMAGED AS A RESULT OF CONTRACTOR OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
3. UNLESS OTHERWISE NOTED, ALL DEMOLISHED MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF AT AN APPROVED DISPOSAL FACILITY OFF OF PORT PROPERTY.
4. PROVIDE FLAGGERS TO MAINTAIN PORT TRAFFIC DURING CONSTRUCTION.
5. PROVIDE SECURE FENCING.
6. CONTRACTOR TO RE-INSTALL SECURE FENCE TO MATCH PRE-CONSTRUCTION CONDITIONS ONCE WORK IS COMPLETE.
7. CONTRACTOR SHALL INSTALL NEW FORCE MAIN PRIOR TO DECOMMISSIONING EXISTING PIPE TO MINIMIZE DISRUPTION TO LIFT STATION OPERATIONS. CONTRACTOR SHALL NOT ALLOW UPLAND AREA TO FLOOD DURING TRANSITION TO NEW FORCE MAIN PIPE.

LEGEND

- FULL DEPTH SAWCUT LIMIT, SEE C4.00 TO C4.03 — 2 C2.01 C4.20
- LAP PAVEMENT SAWCUT LIMIT — 2 C2.01 C4.20
- DEMOLITION ITEM
- EXCAVATION/GRADING AREA WITHIN EXISTING SWALE
- PROJECT WORK LIMITS
- PROPERTY BOUNDARY
- SECURE FENCE REMOVAL
- PX DEMO PHOTO, SEE C2.10

PROJECT NORTH

10' 0 10' 20'
5' 15'
SCALE: 1"=10'

SITE PREPARATION PLAN – BIORETENTION TREATMENT 1-C

SCALE: 1" = 10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

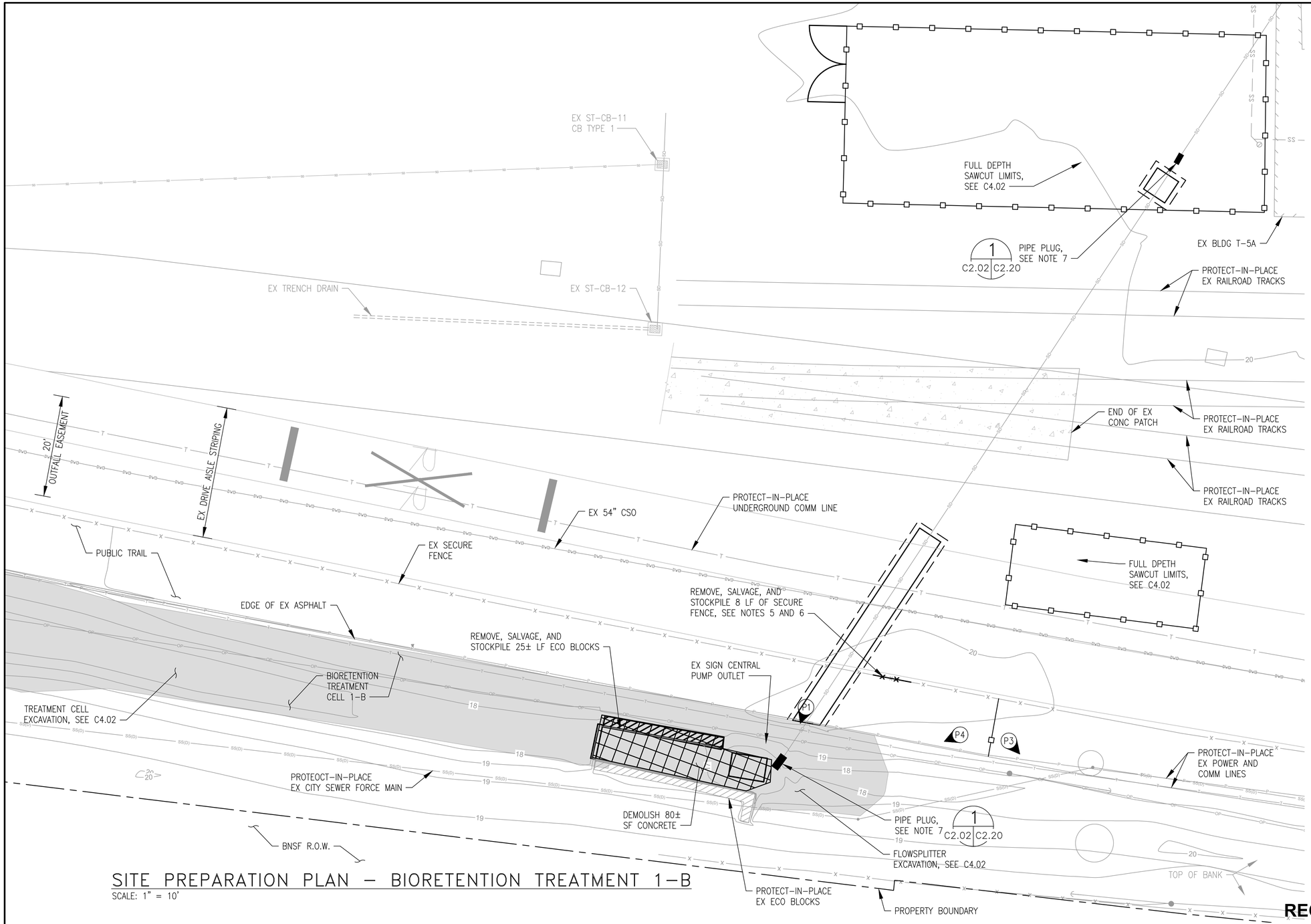
RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT
MARINE TERMINALS
STORMWATER IMPROVEMENTS
SITE PREPARATION PLAN
BIORETENTION TREATMENT 1-C

DWG. NO. **C2.01**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 14 OF 42

RECORD DRAWING



SITE PREPARATION PLAN – BIORETENTION TREATMENT 1-B

SCALE: 1" = 10'

NOTES

1. INSTALL TESC MEASURES BEFORE PAVEMENT REMOVAL AND EXCAVATION.
2. PAVEMENT BEYOND THE LIMITS DEFINED IN THE GRADING AND PAVING PLAN DAMAGED AS A RESULT OF CONTRACTOR OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
3. UNLESS OTHERWISE NOTED, ALL DEMOLISHED MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF AT AN APPROVED DISPOSAL FACILITY OFF OF PORT PROPERTY.
4. PHASE THE SECURE FENCING AND TRENCH EXCAVATION TO ALLOW FOR TRAFFIC TO PASS THROUGH THE DRIVE AISLE. CONTRACTOR SHALL BACKFILL AND PAVE NON-FENCED AREA TRENCH AT THE END OF THE WORK SHIFT, UNLESS ANCHORED METAL PLATES ARE PROVIDED FOR TEMPORARY VEHICLE ACCESS.
5. PROVIDE SECURE FENCING.
6. CONTRACTOR TO RE-INSTALL SECURE FENCE TO MATCH PRE-CONSTRUCTION CONDITIONS ONCE WORK IS COMPLETE.
7. CONTRACTOR SHALL INSTALL NEW FORCE MAIN PRIOR TO DECOMMISSIONING EXISTING PIPE TO MINIMIZE DISRUPTION TO LIFT STATION OPERATIONS. CONTRACTOR SHALL NOT ALLOW UPLAND AREA TO FLOOD DURING TRANSITION TO NEW FORCE MAIN PIPE.

LEGEND

- FULL DEPTH SAWCUT LIMIT, SEE C4.00 TO C4.03 (2 / C2.02 C4.20)
- LAP PAVEMENT SAWCUT LIMIT (2 / C2.02 C4.20)
- DEMOLITION ITEM
- EXCAVATION/GRADING AREA WITHIN EXISTING SWALE
- UTILITY PIPE PLUG
- PROJECT WORK LIMITS
- PROPERTY BOUNDARY
- SECURE FENCE REMOVAL
- PX — DEMO PHOTO, SEE C2.10
- CONSTRUCTION SITE ENTRANCE

PROJECT NORTH

10' 0 10' 20'
5' 15'

SCALE: 1"=10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

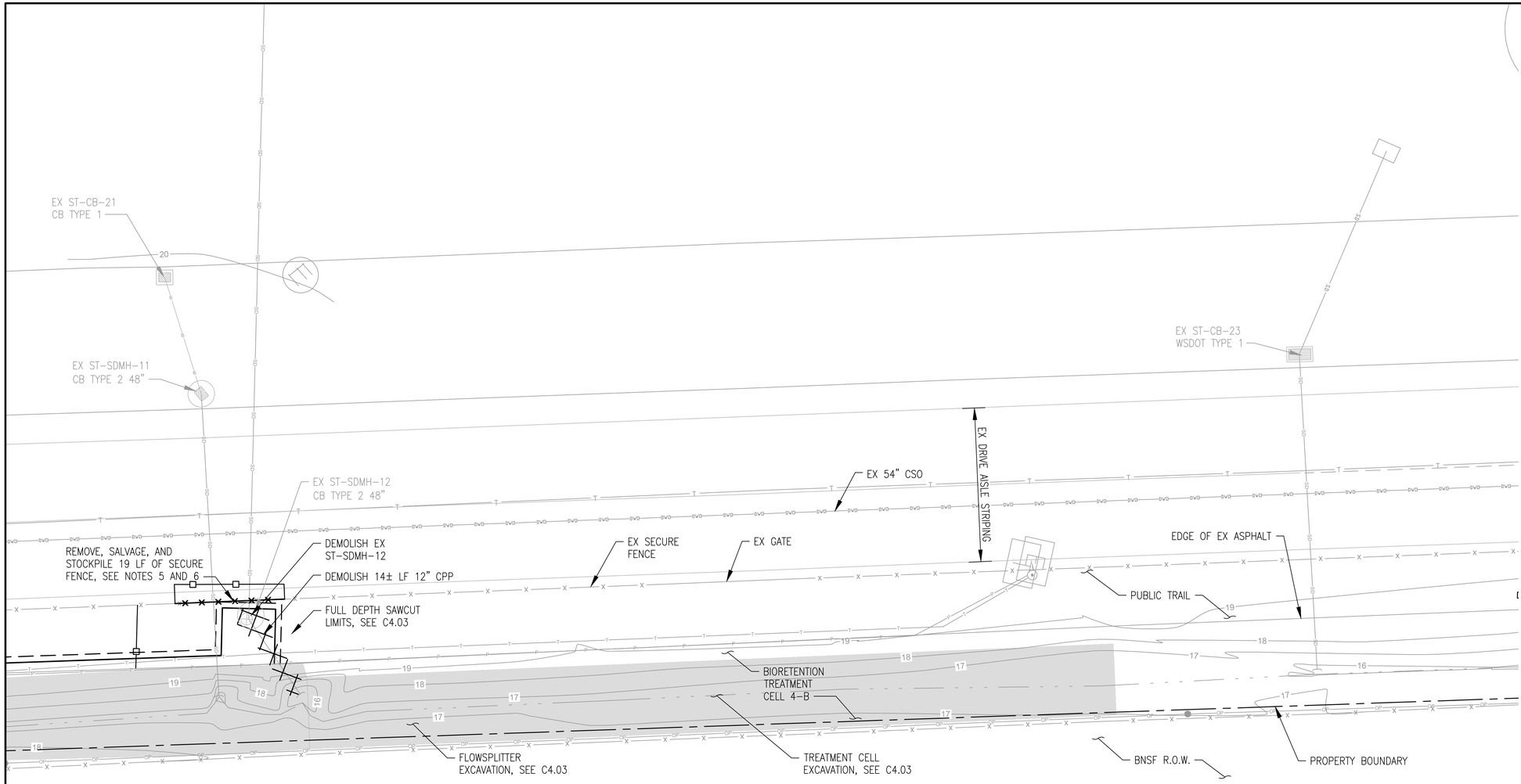
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
SITE PREPARATION PLAN
BIORETENTION TREATMENT 1-B

DWG. NO. **C2.02**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 15 OF 42

RECORD DRAWING



NOTES

1. INSTALL TESC MEASURES BEFORE PAVEMENT REMOVAL AND EXCAVATION.
2. PAVEMENT BEYOND THE LIMITS DEFINED IN THE GRADING AND PAVING PLAN DAMAGED AS A RESULT OF CONTRACTOR OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE
3. UNLESS OTHERWISE NOTED, ALL DEMOLISHED MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF AT AN APPROVED DISPOSAL FACILITY OFF OF PORT PROPERTY.
4. PROTECT-IN-PLACE EXISTING RAILROAD TRACKS NOT SHOWN ON THIS DRAWING.
5. REMOVE SECURE FENCING ONLY AS NECESSARY TO COMPLETE SITE PREPARATIONS. PROVIDE SECURE FENCING AROUND WORK AREA TO KEEP SITE SECURE AT ALL TIMES.
6. CONTRACTOR TO RE-INSTALL SECURE FENCE TO MATCH PRE-CONSTRUCTION CONDITIONS ONCE WORK IS COMPLETE.

LEGEND

- FULL DEPTH SAWCUT LIMIT, SEE C4.00 TO C4.03 — 2 / C2.03 | C4.20
- LAP PAVEMENT SAWCUT LIMIT — 2 / C2.03 | C4.20
- DEMOLITION ITEM
- EXCAVATION/GRADING AREA WITHIN EXISTING SWALE
- PROJECT WORK LIMITS
- PROPERTY BOUNDARY
- SECURE FENCE REMOVAL

PROJECT NORTH

10' 0 10' 20'
5' 15'
SCALE: 1"=10'

SITE PREPARATION PLAN – BIORETENTION TREATMENT 4-B

SCALE: 1" = 10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT
MARINE TERMINALS
STORMWATER IMPROVEMENTS
SITE PREPARATION PLAN
BIORETENTION TREATMENT 4-B

DWG. NO. **C2.03**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 16 OF 42

RECORD DRAWING



P1 PHOTO



P2 PHOTO



P3 PHOTO

NOTES

1. THE INTENT OF THE DEMOLITION ITEMS IS TO SHOW GENERAL SCOPE OF ITEMS TO BE REMOVED/DEMOLISHED. THE PHOTOS ARE FOR REFERENCE ONLY AND HIGHLIGHT ITEMS IN THE FOREGROUND TO BE REMOVED/DEMOLISHED. ITEMS IN THE BACKGROUND TO BE DEMOLISHED ARE NOT NECESSARILY IDENTIFIED.

LEGEND

DEMOLITION ITEM



P4 PHOTO



P5 PHOTO



P6 PHOTO

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259–3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

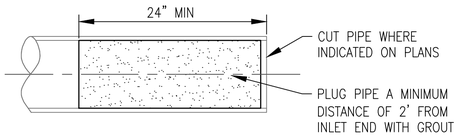
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
SITE PREPARATION
PHOTOS

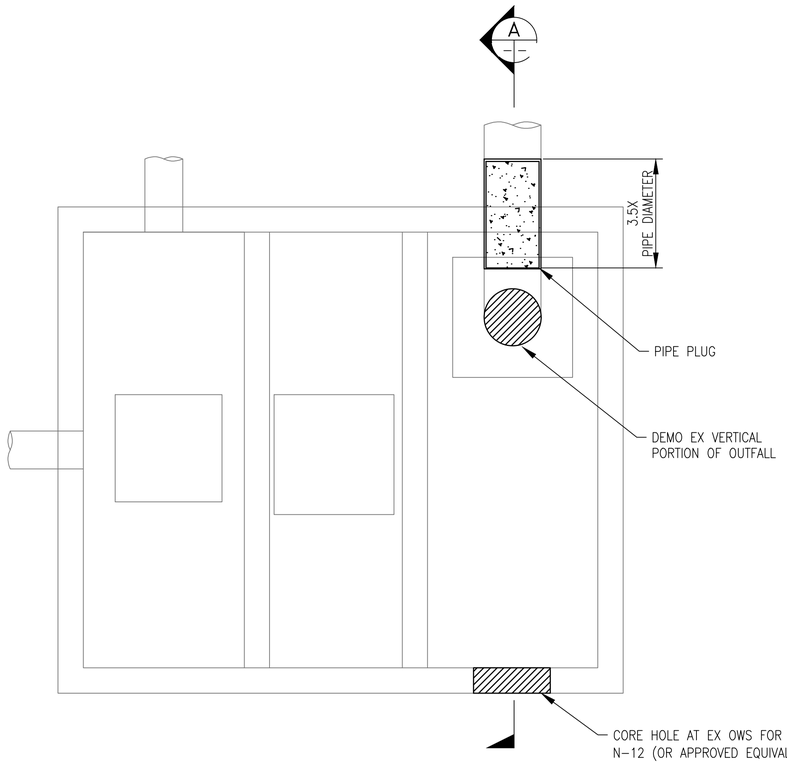
DWG. NO. **C2.10**
CIP NO. 1–0–060–01
PROJECT NO. MT–ST–2024–03
SHEET NO. 17 OF 42

RECORD DRAWING



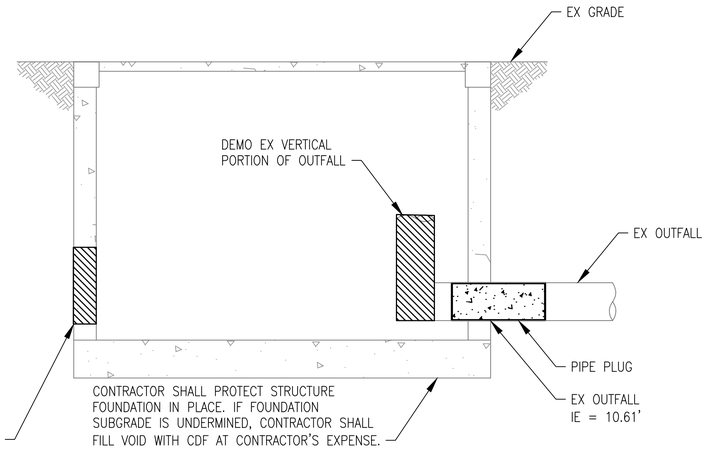
1 DETAIL–CUT AND CAP ABANDONED PIPE

C2.01, C2.02, C2.03 C2.20 SCALE: NTS



2 PLAN–OWS MODIFICATION

C2.00 C2.20 SCALE: NTS



A SECTION–OWS MODIFICATION

SCALE: NTS

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259–3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
SITE PREPARATION
DETAILS

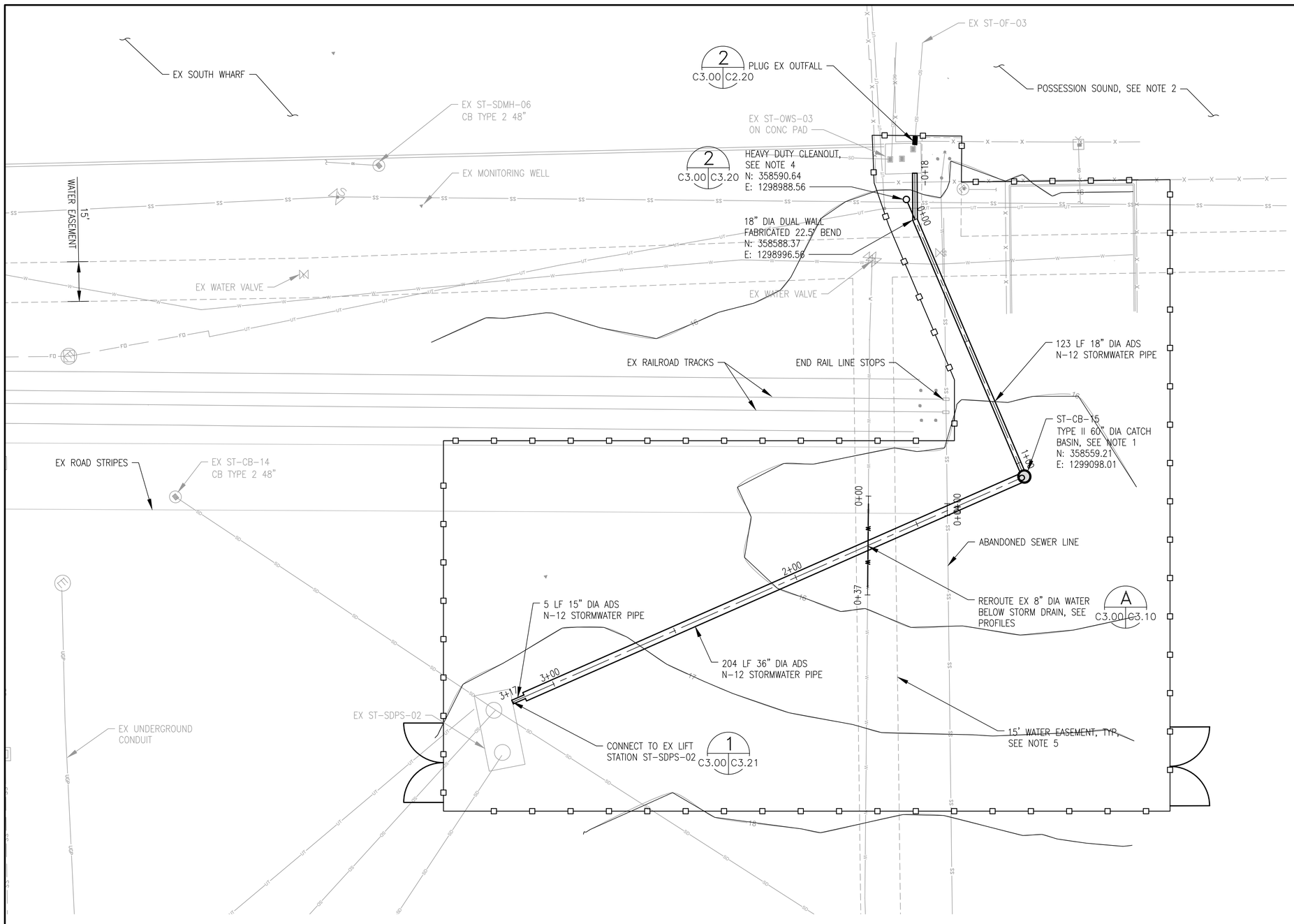
DWG. NO. **C2.20**

CIP NO. 1–0–060–01

PROJECT NO. MT–ST–2024–03

SHEET NO. 18 OF 42

RECORD DRAWING



NOTES

1. PROVIDE TOP-PICK LOAD RATED STRUCTURE PER FIGURE 1 OF G1.03. SEE SPECIFICATIONS FOR STRUCTURE CALCULATION REQUIREMENT.
2. CONTRACTOR SHALL NOT PERFORM ANY WORK BELOW MEAN HIGHER HIGH WATER (MHHW = 8.85' NAVD88). ALL WORK SHALL BE PERFORMED IN THE UPLAND AREA. IN-WATER WORK IS PROHIBITED.
3. VERIFY INVERTS AND PIPE DIAMETERS AT ALL LOCATIONS PRIOR TO CONSTRUCTING STORM DRAINAGE CONVEYANCE PIPES OR STRUCTURES.
4. CONTRACTOR SHALL FIELD LOCATE CLEAN OUT TO AVOID CONFLICT WITH EXISTING SANITARY SEWER AND ELECTRICAL LINE.
5. CONTRACTOR SHALL COORDINATE NECESSARY INSPECTIONS WITH THE CITY OF EVERETT AND OWNER.

LEGEND

- SD — STORM DRAIN PIPE LESS THAN 12" DIA
- STORM DRAIN PIPE 12" DIA AND GREATER
- W — W — WATER LINE
- CATCH BASIN
- PIPE PLUG
- TEMP CONSTRUCTION FENCE (SEE TESC PLANS)

PROJECT NORTH

20' 0 20' 40'
10' 30'

SCALE: 1"=20'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

STORMWATER PLAN – ST-OF-03 TO ST-SDPS-02

SCALE: 1" = 20'

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. Box 4272
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
STORMWATER PLAN
ST-OF-03 TO ST-SDPS-02

DWG. NO. **C3.00**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 19 OF 42

RECORD DRAWING

EX BLDG T-6

EX ST-CB-10
CB TYPE 1

EX ELECTRICAL CABINET

EX ST-CB-09
CB TYPE 1

EX SD-SDMH-04
CB TYPE 1

EX DRIVE AISLE STRIPING

EX CONC PATCH

EX RAILROAD TRACKS

EX SECURE FENCE

EX GATE CONTROL BOX

EX GATE

PUBLIC TRAIL

EX 10" DIA DIP FORCEMAIN

A C3.01 C3.25

26 LF 10" DIA DIP FORCEMAIN

CONNECT TO EX 10" DIP FORCE MAIN
N: 357779.57
E: 1299011.08

EX 54" CSO

REMOVE ECOBLOCK TO INSTALL FORCEMAIN, SEE NOTE 3

2 C3.01 C3.21

ABOVE GRADE FLANGE CONNECTION
N: 357756.00
E: 1299023.13

EDGE OF EX ASPHALT

OVERFLOW PIPING, SEE C3.22

1

EX ECO BLOCKS, TYP

EX CITY SEWER FORCE MAIN

BIORETENTION TREATMENT CELL 1-C, SEE C5.00

FLOW SPLITTER 1-C CL
N: 357758.46
E: 1299032.62

FLOW SPLITTER 1-C, SEE C3.22

18" DIA CULVERT BELOW BIORETENTION CELL

FLOW SPLITTER 1-C CL
N: 357725.91
E: 1299001.06

TOP OF BANK

BNSF RAIL BYPASS STRUCTURE

PROPERTY BOUNDARY

NOTES

1. VERIFY INVERTS AND PIPE DIAMETERS AT AT ALL LOCATIONS PRIOR TO CONSTRUCTING STORM DRAINAGE CONVEYANCE PIPES OR STRUCTURES.
2. ECOBLOCKS MAY BE REMOVED FOR FORCEMAIN INSTALLATION. ECO BLOCKS SHALL BE REPLACED WHEN CONSTRUCTION IS COMPLETE.

LEGEND

- SD — STORM DRAIN PIPE LESS THAN 12" DIA
- STORM DRAIN PIPE 12" DIA AND GREATER
- BIORETENTION CELL
- PROPERTY BOUNDARY
- TEMP CONSTRUCTION FENCE (SEE TESC PLANS)

PROJECT NORTH

10' 0 10' 20'
5' 15'

SCALE: 1"=10'

STORMWATER PLAN – BIORETENTION TREATMENT 1-C

SCALE: 1" = 10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
2	03/14/2025	NAW	RECORD DRAWING
1	10/10/2024	ECN	FIELD ORDER #3
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
STORMWATER PLAN
BIORETENTION TREATMENT 1-C

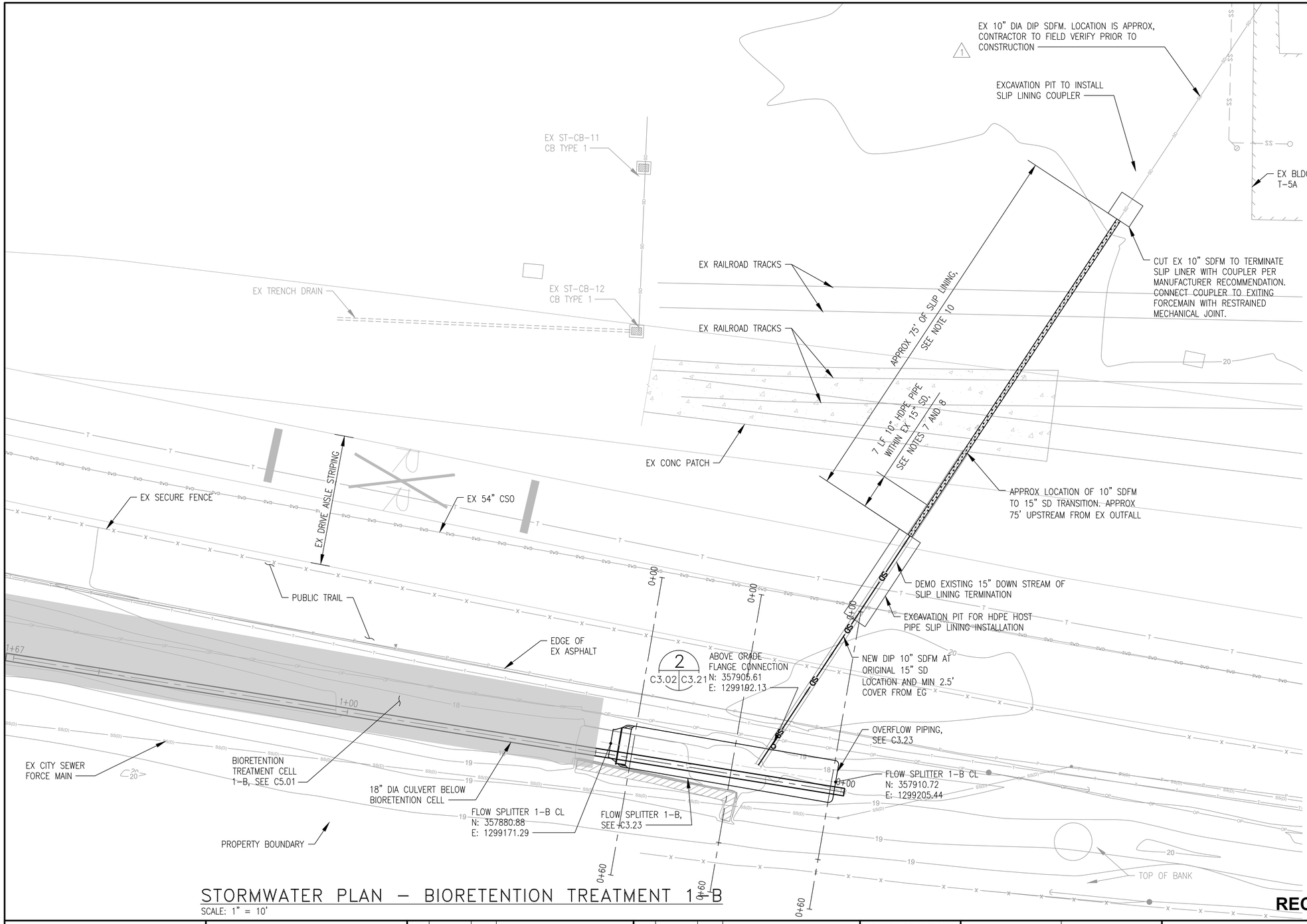
DWG. NO. **C3.01**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 20 OF 42

RECORD DRAWING



STORMWATER PLAN – BIORETENTION TREATMENT 1-B

SCALE: 1" = 10'

NOTES

1. NOT USED. 1
2. CONTRACTOR SHALL KEEP EXISTING FORCE MAIN OPERATIONAL AS LONG AS PRACTICAL. CONTRACTOR SHALL MAKE EXISTING PIPE CONNECTION ONLY AFTER NEW FORCE MAIN TO SWALE IS CONSTRUCTED. CONNECT TO EXISTING DIP FORCEMAIN WITH ROMAC 501 OR APPROVED EQUAL PIPE COUPLER. SEE PROFILES FOR ADDITIONAL FITTING INFORMATION.
3. PHASE THE SECURE FENCING AND TRENCH EXCAVATION TO ALLOW FOR TRAFFIC TO PASS THROUGH THE DRIVE AISLE. CONTRACTOR SHALL BACKFILL AND PAVE NON-FENCED AREA TRENCH AT THE END OF WORK SHIFT, UNLESS ANCHORED METAL PLATES ARE PROVIDED FOR TEMPORARY VEHICLE ACCESS. COORDINATE CLOSURES WITH PORT.
4. VERIFY INVERTS AND DIAMETERS AT ALL LOCATIONS PRIOR TO CONSTRUCTING STORM DRAINAGE CONVEYANCE PIPES OR STRUCTURES.
5. SEE STORM DRAIN PROFILES ON C3.10 FOR SLOPE.
6. EXISTING REINFORCED CONCRETE BUILDING FOUNDATIONS MAY EXIST WITHIN EXCAVATION FOOTPRINT. CONTRACTOR SHALL REMOVE AND DISPOSE IF ENCOUNTERED, SEE SPECIFICATIONS.
7. PRIOR TO SLIP LINING AND HOST PIPE INSTALLATION, CONTRACTOR SHALL VIDEO SCOPE TO VERIFY EXISTING PIPE LOCATION AND IS CLEAN FOR SLIP LINING WORK. ABUT 10" HDPE HOST PIPE (FOR SLIP LINING) TO EX 10" SDFM AT THE LOCATION WHERE EX SDFM TRANSITIONS FROM 10" TO 15". PERFORM REPAIR AS REQUIRED BY SLIP LINING VENDOR AT PIPE SIZE TRANSITION
8. CONTRACTOR SHALL VIDEO SCOPE AND NOTIFY ENGINEERS TO FIELD VERIFY (DURING VIDEO SCOPING WORK) TO CONFIRM NEW HDPE HOST PIPE ALIGNS WITH THE EX 10" SDFM AND WITHIN ANY SEPARATION TOLERANCE REQUIRED BY THE SLIP LINER MANUFACTURER.
9. AFTER SLIP LINING IS INSTALLED, CONTRACTOR SHALL PROVIDE VIDEO AND HYDROSTATIC PRESSURE TEST(EXCLUDING DISINFECTION REQUIREMENT) PER SECTION 33 10 00 TO SHOW THE ALL SLIP LINED PIPE HAS NO DEFECT.
10. SLIP LINER SHALL BE A FLEXIBLE FABRIC REINFORCED PIPE DESIGNED FOR PRESSURE PIPES AND CLASS III PIPE REHABILITATION BASED ON THE CURRENT AWWA CLASSIFICATIONS.

LEGEND

- SD — STORM DRAIN PIPE LESS THAN 12" DIA
- STORM DRAIN PIPE 12" DIA AND GREATER
- BIORETENTION CELL
- PROPERTY BOUNDARY
- TEMP CONSTRUCTION FENCE (SEE TESC PLANS)
- SLIP LINING, SEE NOTES 9 AND 10 — 1 C3.02 C3.26

PROJECT NORTH

10' 0 10' 20'
5' 15'
SCALE: 1"=10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
2	03/14/2025	NAW	RECORD DRAWING
1	08/28/2024	KK	CB001: REVISED FORCEMAIN MODIFICATION
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

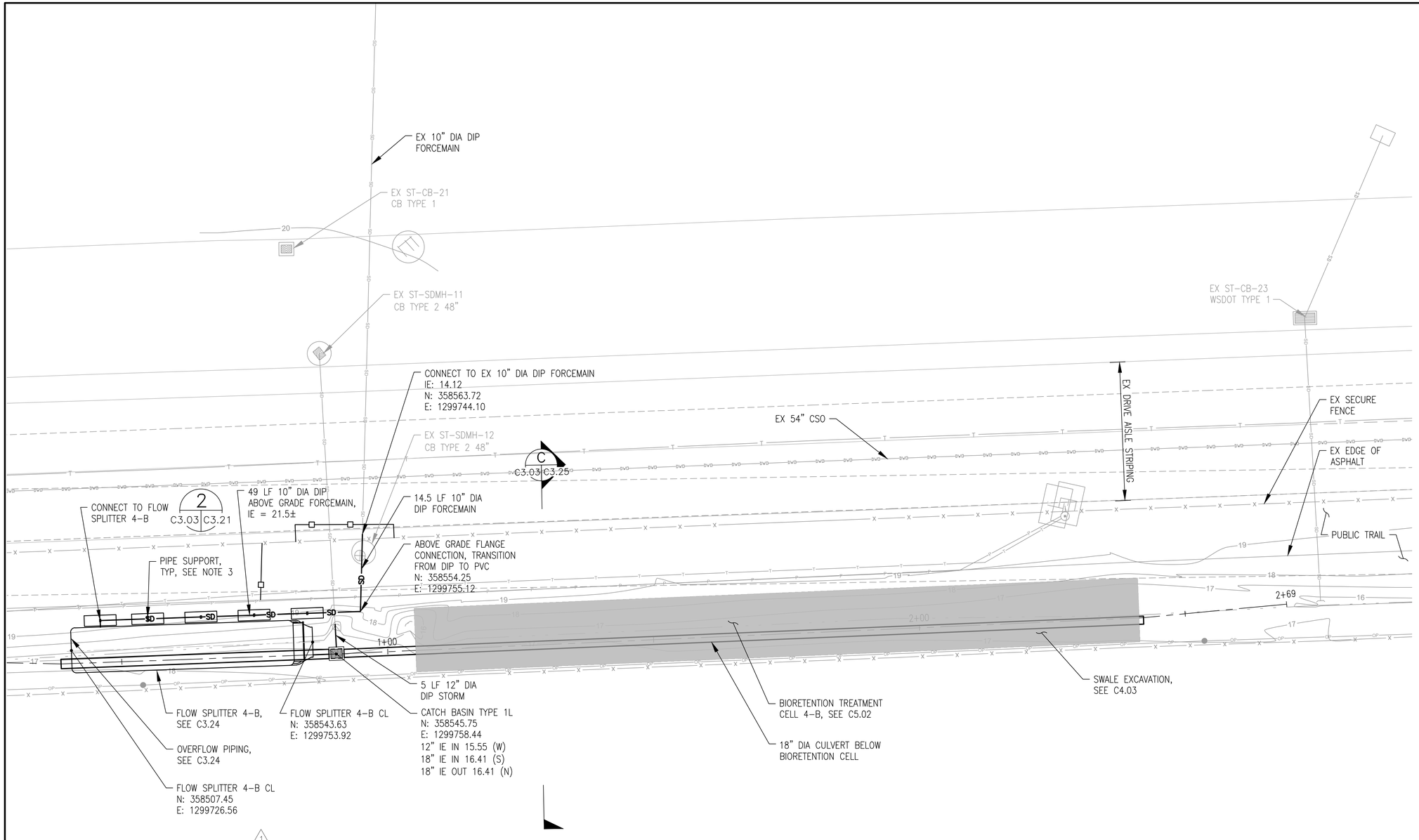
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
STORMWATER PLAN
BIORETENTION TREATMENT 1-B

DWG. NO. **C3.02**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 21 OF 42

RECORD DRAWING



NOTES

1. EXISTING NORTH LIFT STATION FORCEMAIN FLOW TRANSITIONS TO GRAVITY FLOW AT EXISTING ST-SDMH-12. CONTRACTOR SHALL INSTALL A 10" DIA DIP FORCEMAIN TO CONNECT TO EXISTING FORCEMAIN DAYLIGHT AT EXISTING ST-SDMH-12. ALL PIPES BETWEEN EXISTING NORTH LIFT STATION AND NEW FLOW CONTROL STRUCTURE WILL BE PRESSURIZED AND DO NOT TRANSITION TO GRAVITY FLOW UNTIL WATER ENTERS FLOW CONTROL STRUCTURE.
2. VERIFY INVERTS AND PIPE DIAMETERS AT ALL LOCATIONS PRIOR TO CONSTRUCTING STORM DRAINAGE CONVEYANCE PIPES OR STRUCTURES.
3. ABOVE-GRADE PIPE SUPPORT ON ECOBLOCKS. CONTRACTOR SHALL SECURE PIPE TO ECOBLOCK MINIMALLY EVERY 10 FT.

1

LEGEND

- SD — STORM DRAIN PIPE LESS THAN 12" DIA
- STORM DRAIN PIPE 12" DIA AND GREATER
- BIORETENTION CELL
- PROPERTY BOUNDARY
- TEMP CONSTRUCTION FENCE (SEE TESC PLANS)

PROJECT NORTH

10' 0 10' 20'
5' 15'

SCALE: 1"=10'

STORMWATER PLAN – BIORETENTION TREATMENT 4-B

SCALE: 1" = 10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
2	03/14/2025	NAW	RECORD DRAWING
1	10/07/2024	ECN	FIELD ORDER #3
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

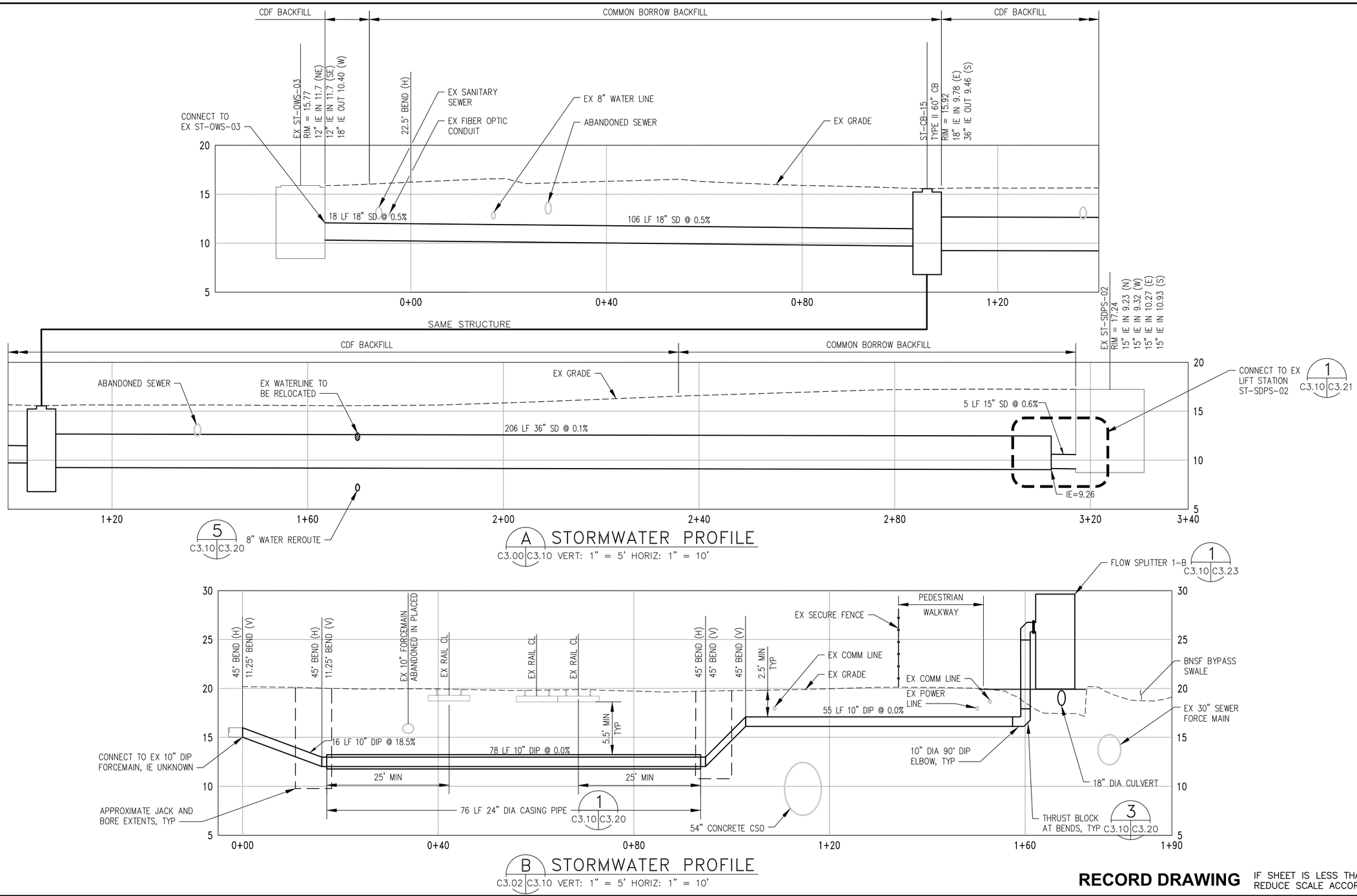
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
STORMWATER PLAN
BIORETENTION TREATMENT 4-B

DWG. NO. **C3.03**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 22 OF 42

RECORD DRAWING



A STORMWATER PROFILE
C3.00 C3.10 VERT: 1" = 5' HORIZ: 1" = 10'

B STORMWATER PROFILE
C3.02 C3.10 VERT: 1" = 5' HORIZ: 1" = 10'

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

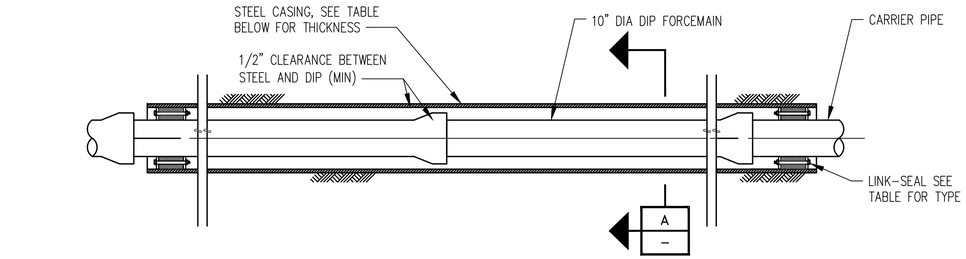
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

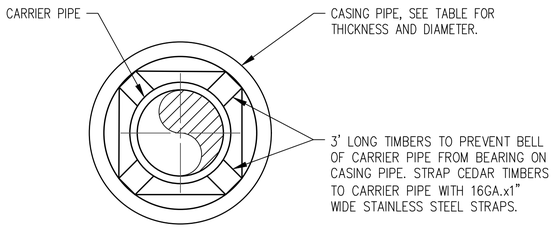
PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
STORMWATER
PROFILES

DWG. NO. **C3.10**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 23 OF 42

RECORD DRAWING





MINIMUM THICKNESS FOR CASING PIPE	DIAMETER OF CASING PIPE
0.375"	24"

CARRIER PIPE SIZE (NOMINAL)	CASING SIZE (NOMINAL)	LINK-SEAL SIZE NO.
10"	24"	LS-500-C

NOTES:

1. THIS SECTION SHOWS PIPE CASING AS REQUIRED BY AREMA STANDARDS FOR E80 LOADING.
2. CASING MUST EXTEND 25' BEYOND THE CENTERLINE OF THE TRACKS PER AREMA SECTION 5.3.4.3.

CASING:

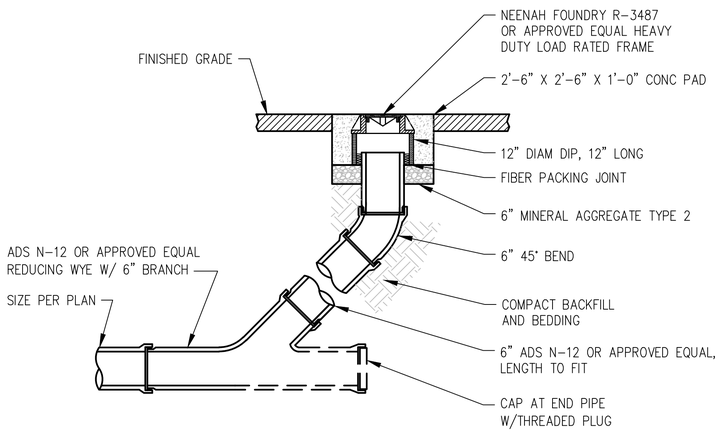
SIZE AND MINIMUM THICKENESS OF CASING SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THE THICKNESS CONSISTENT WITH HIS OPERATION.

CASING SEAL:

MINIMUM 3/16" THICK, SHEET TYPE SYNTHETIC RUBBER WITH STAINLESS STEEL BANDS.

SECTION A-A
SD PIPE

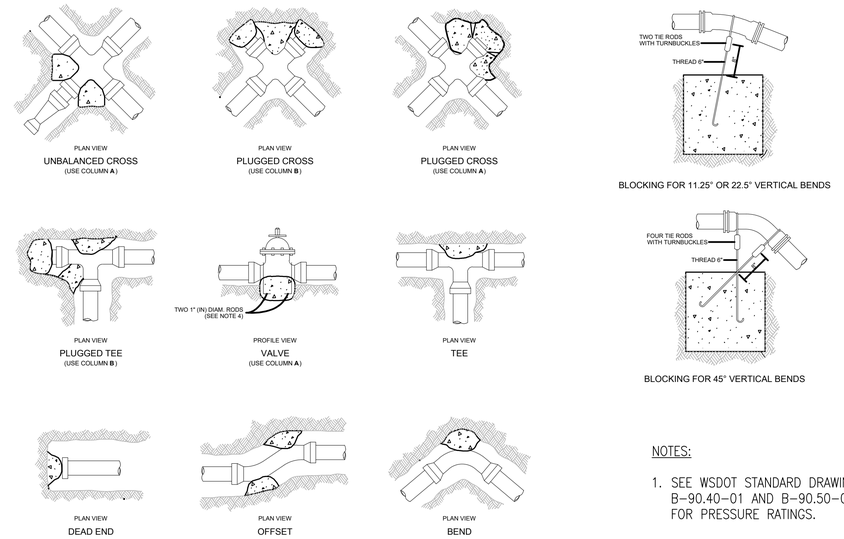
1 FORCEMAIN CASING
C3.10 | C3.20 SCALE: 1"=2'



2 HEAVY DUTY CLEANOUT
C3.00 | C3.20 SCALE: 1"=2'

NOT USED

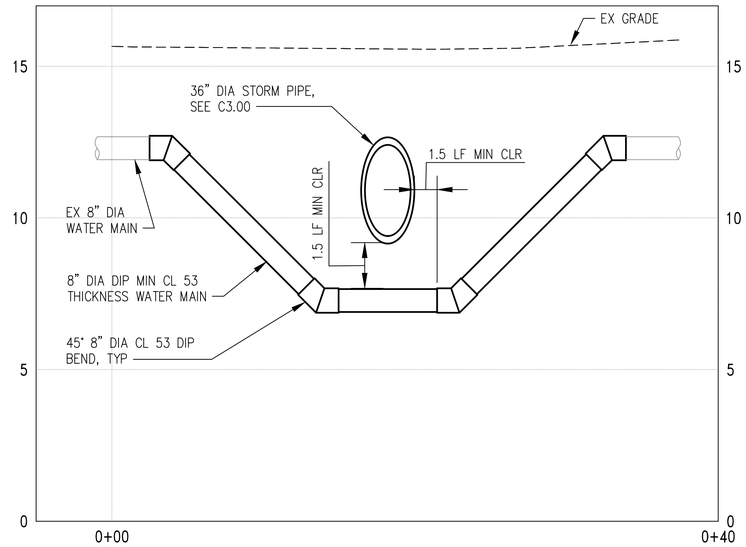
4 NOT USED
– | –



NOTES:

1. SEE WSDOT STANDARD DRAWING B-90.40-01 AND B-90.50-00 FOR PRESSURE RATINGS.

3 THRUST BLOCK
C3.00 | C3.20 SCALE: 1"=2'



5 WATER CROSSING REROUTE
C3.10 | C3.20 SCALE: 1"=5'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

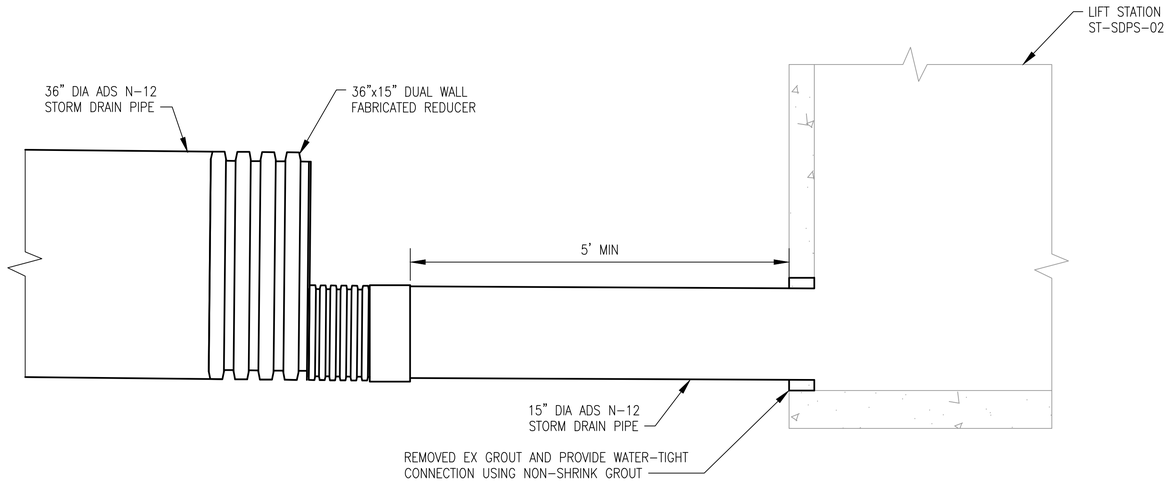
RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

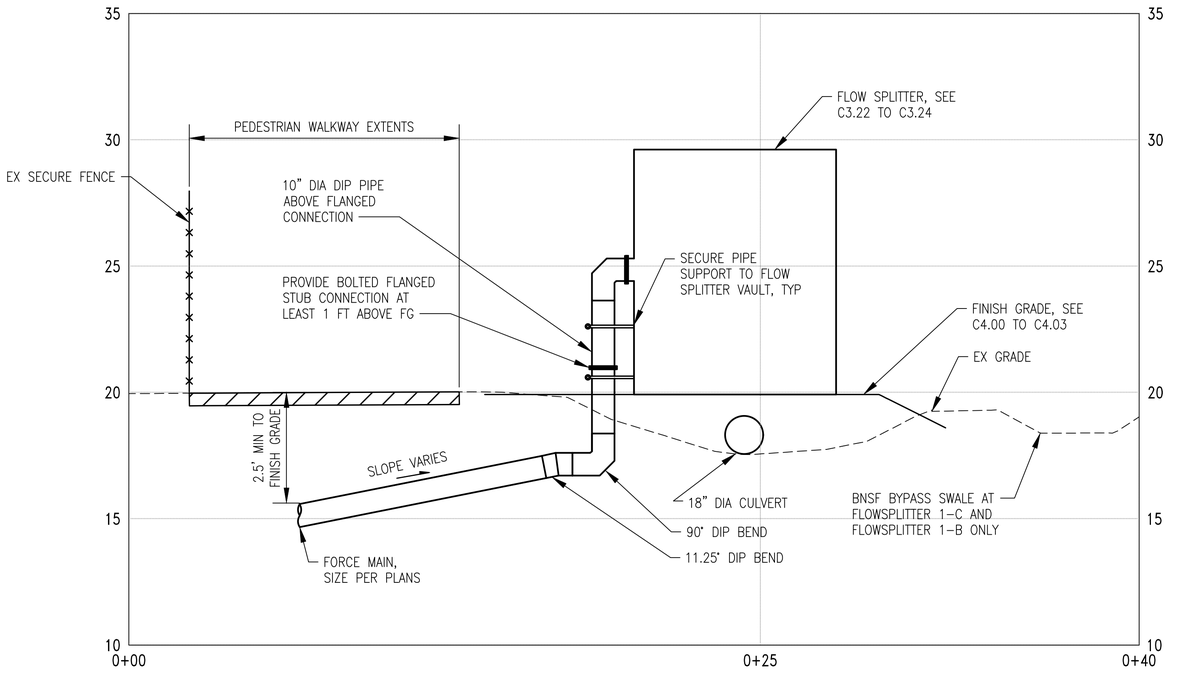
PORT OF EVERETT
MARINE TERMINALS
STORMWATER IMPROVEMENTS
STORMWATER
DETAILS

DWG. NO. **C3.20**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 24 OF 42

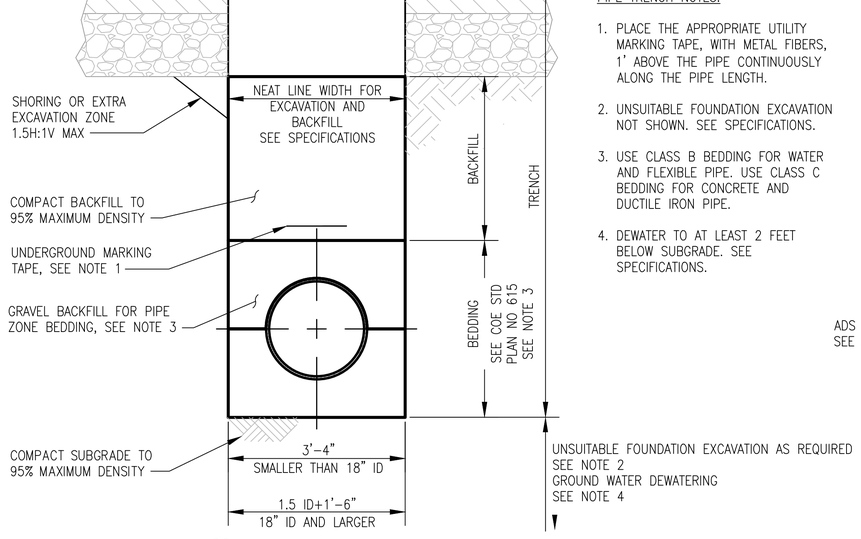
RECORD DRAWING



1 CONNECTION TO EX LIFT STATION
C3.10 C3.21 SCALE: 1"=1'



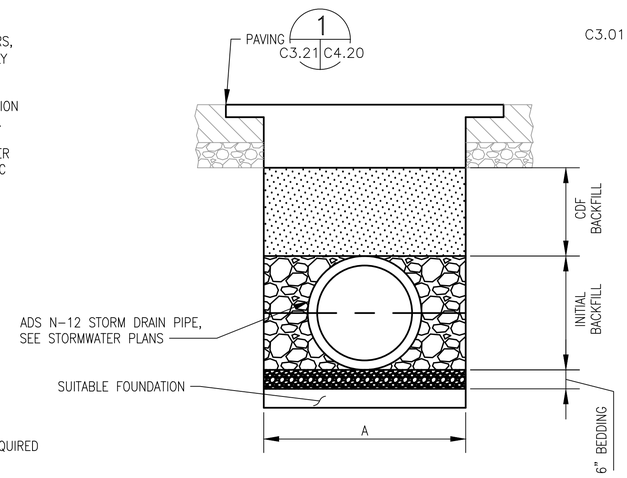
2 DETAIL – ABOVE GRADE FLANGE CONNECTION
C3.01, C3.02, C3.03 C3.21 SCALE: 1" = 3'-0"



PIPE TRENCH NOTES:

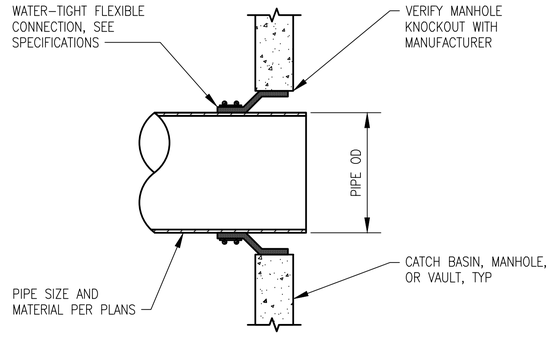
1. PLACE THE APPROPRIATE UTILITY MARKING TAPE, WITH METAL FIBERS, 1' ABOVE THE PIPE CONTINUOUSLY ALONG THE PIPE LENGTH.
2. UNSUITABLE FOUNDATION EXCAVATION NOT SHOWN. SEE SPECIFICATIONS.
3. USE CLASS B BEDDING FOR WATER AND FLEXIBLE PIPE. USE CLASS C BEDDING FOR CONCRETE AND DUCTILE IRON PIPE.
4. DEWATER TO AT LEAST 2 FEET BELOW SUBGRADE. SEE SPECIFICATIONS.

3 TYPICAL TRENCH
C3.10 C3.21 SCALE: NTS



PIPE DIA	A
18"	51"
36"	88"

4 ADS N-12 YARD AREA TRENCH
C3.10 C3.21 SCALE: 1"=2'



5 PIPE TO STRUCTURE CONNECTION
C3.00 C3.21 SCALE: 1"=2'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

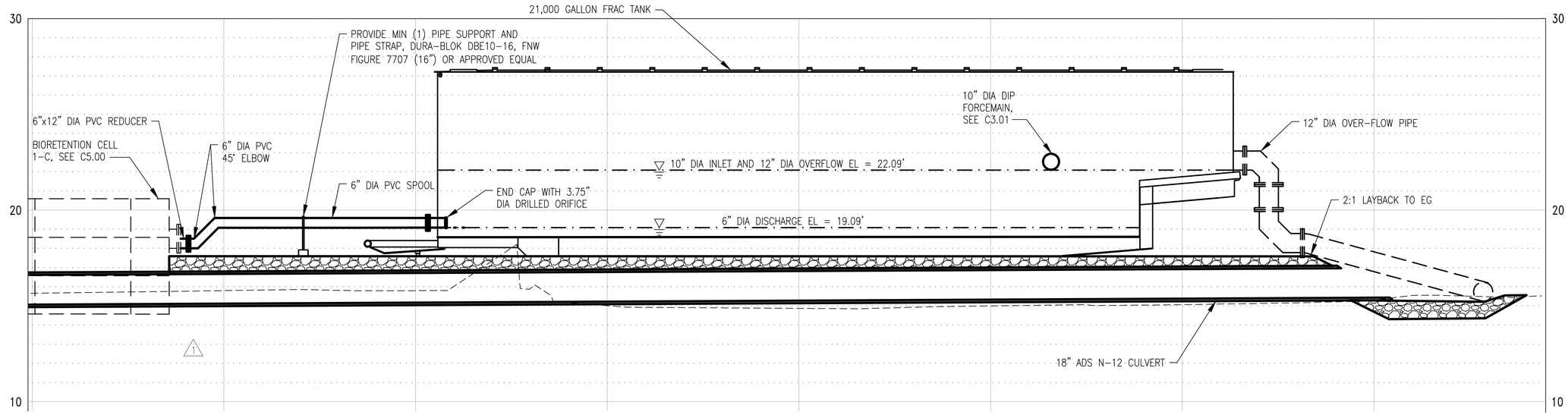
RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

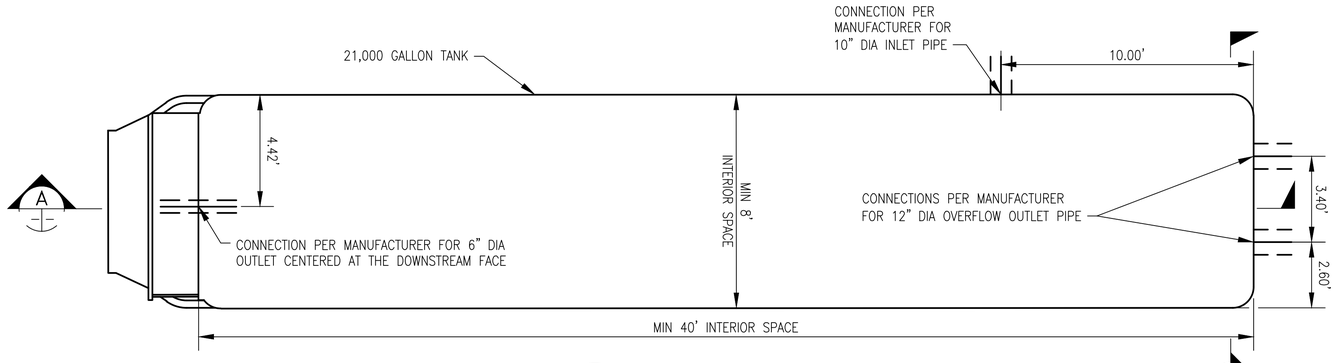
PORT OF EVERETT
MARINE TERMINALS
STORMWATER IMPROVEMENTS
STORMWATER
DETAILS

DWG. NO. **C3.21**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 25 OF 42

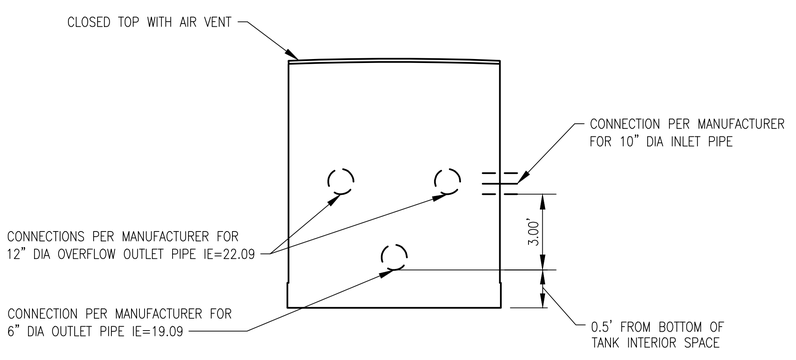
RECORD DRAWING



A SECTION – 1-C FLOWSPLITTER
NOT TO SCALE



1 PLAN – 1-C FLOW SPLITTER
C3.01 C3.22 SCALE: NTS



B SECTION – 1-C FLOW SPLITTER
SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
2	03/14/2025	NAW	RECORD DRAWING
1	10/09/2024	ECN	FIELD ORDER #3
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

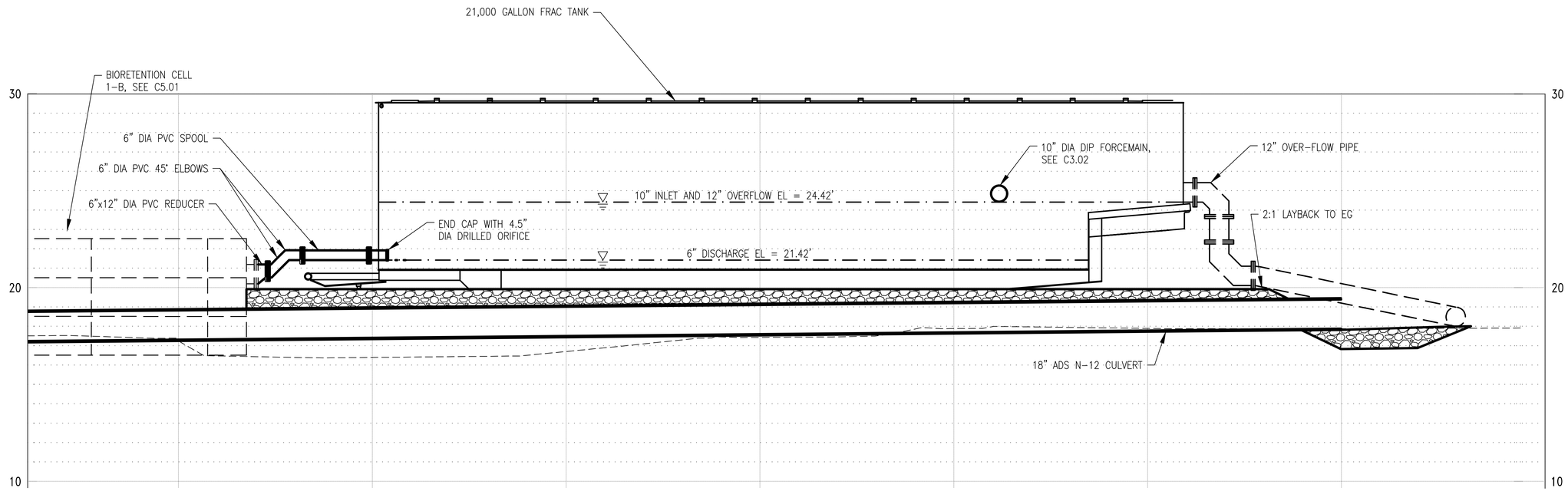
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

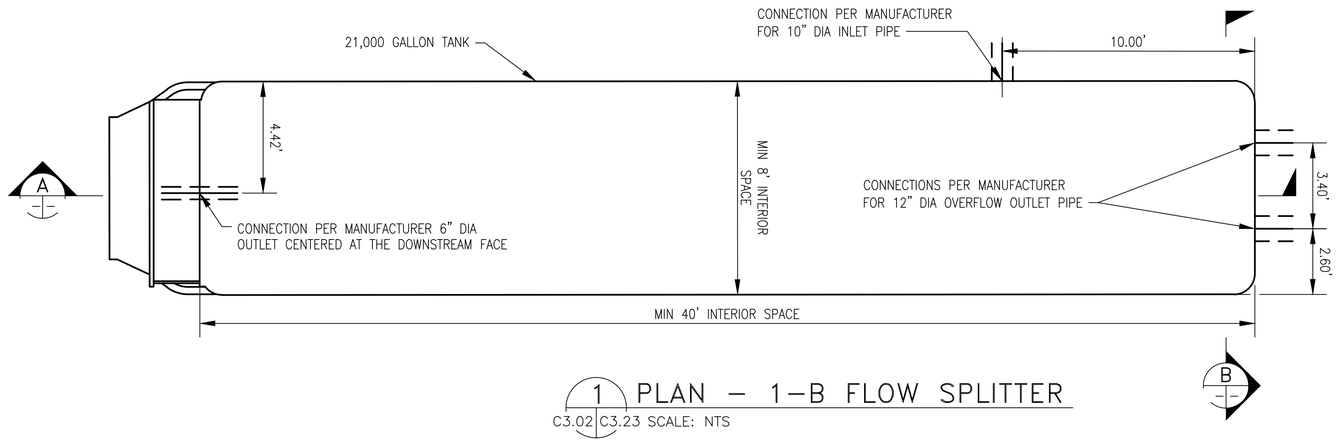
MARINE TERMINALS
STORMWATER IMPROVEMENTS
FLOWSPLITTER DETAILS
BIORETENTION TREATMENT 1-C

DWG. NO. **C3.22**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 26 OF 42

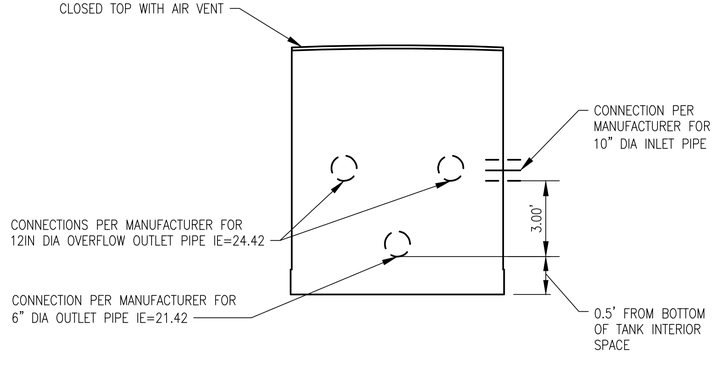
RECORD DRAWING



A SECTION – 1-B FLOW SPLITTER
NOT TO SCALE



1 PLAN – 1-B FLOW SPLITTER
C3.02 C3.23 SCALE: NTS



B SECTION – 1-B FLOW SPLITTER
SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

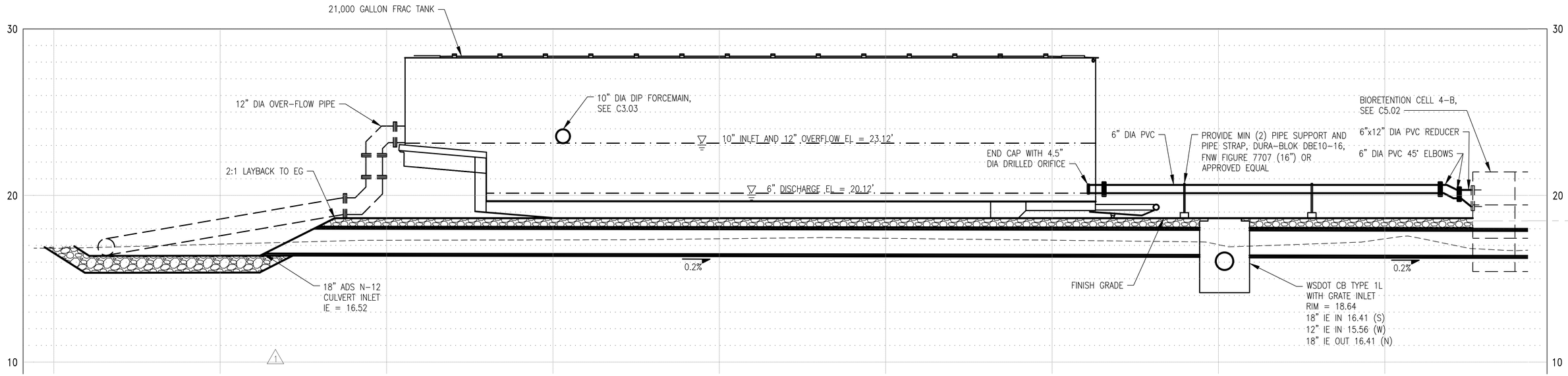
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

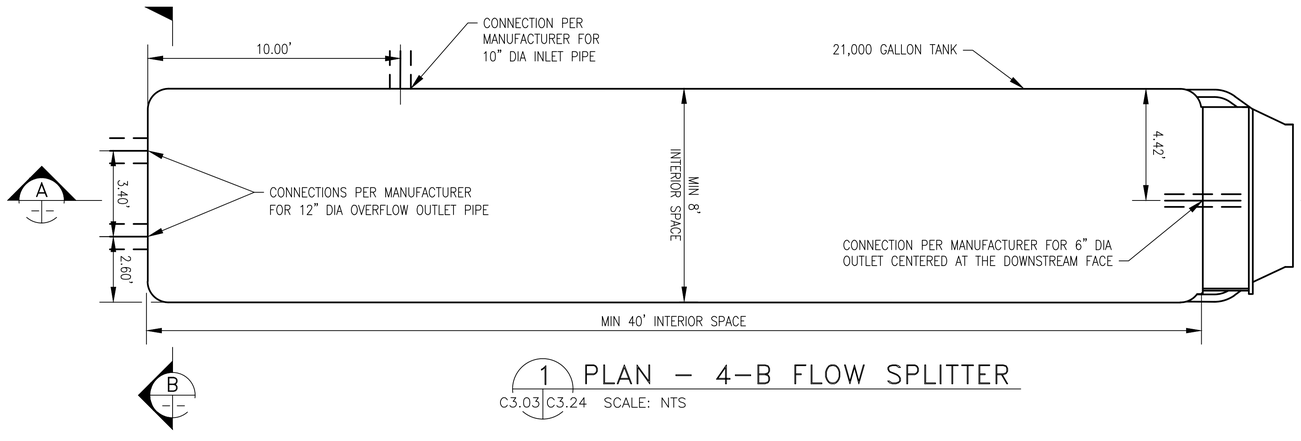
MARINE TERMINALS
STORMWATER IMPROVEMENTS
FLOWSPLITTER DETAILS
BIORETENTION TREATMENT 1-B

DWG. NO. **C3.23**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 27 OF 42

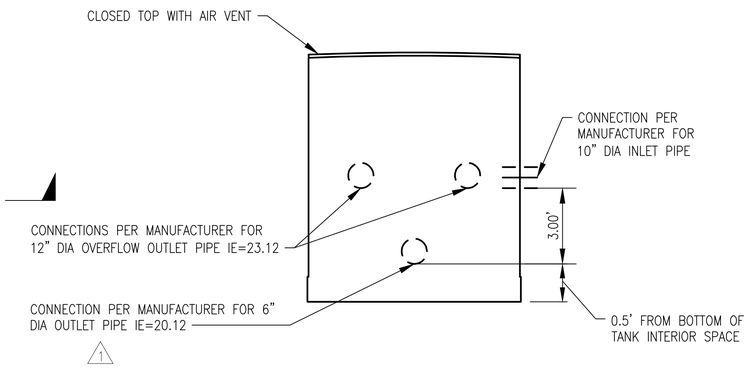
RECORD DRAWING



A SECTION – 4-B FLOW SPLITTER
NOT TO SCALE



1 PLAN – 4-B FLOW SPLITTER
C3.03 C3.24 SCALE: NTS



B SECTION – 4-B FLOW SPLITTER
SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
2	03/14/2025	NAW	RECORD DRAWING
1	10/09/2024	ECN	FIELD ORDER #3
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

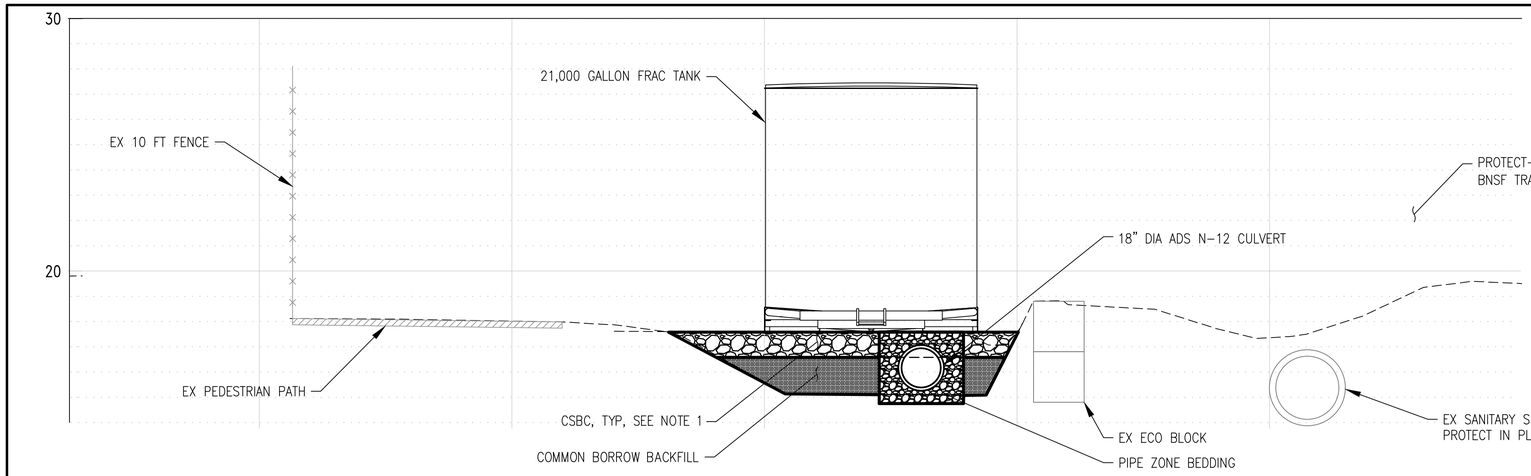
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

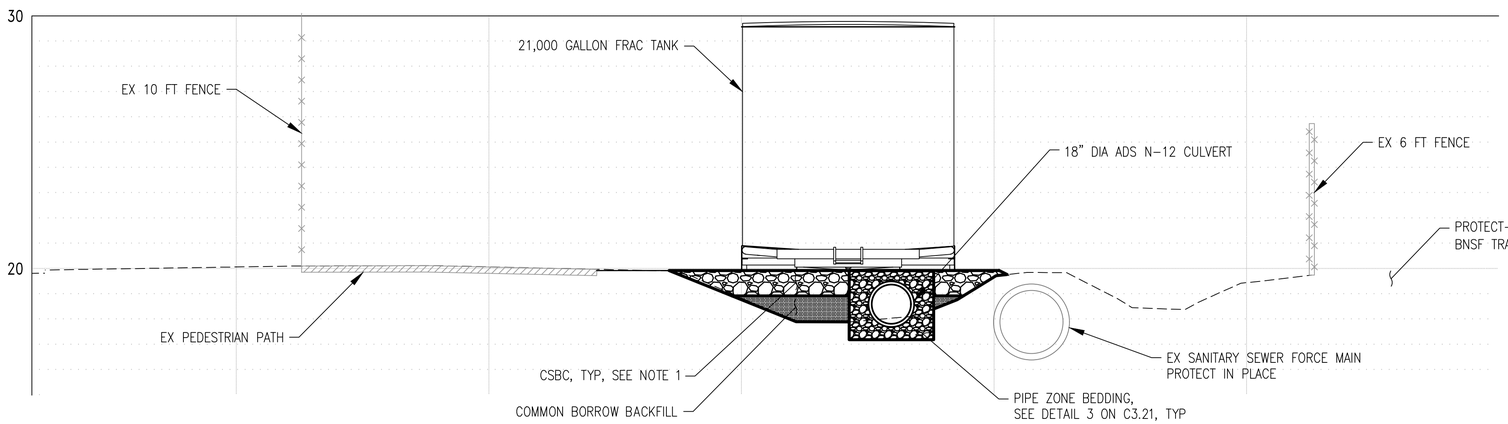
MARINE TERMINALS
STORMWATER IMPROVEMENTS
FLOWSPLITTER DETAILS
BIORETENTION TREATMENT 4-B

DWG. NO. **C3.24**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 28 OF 42

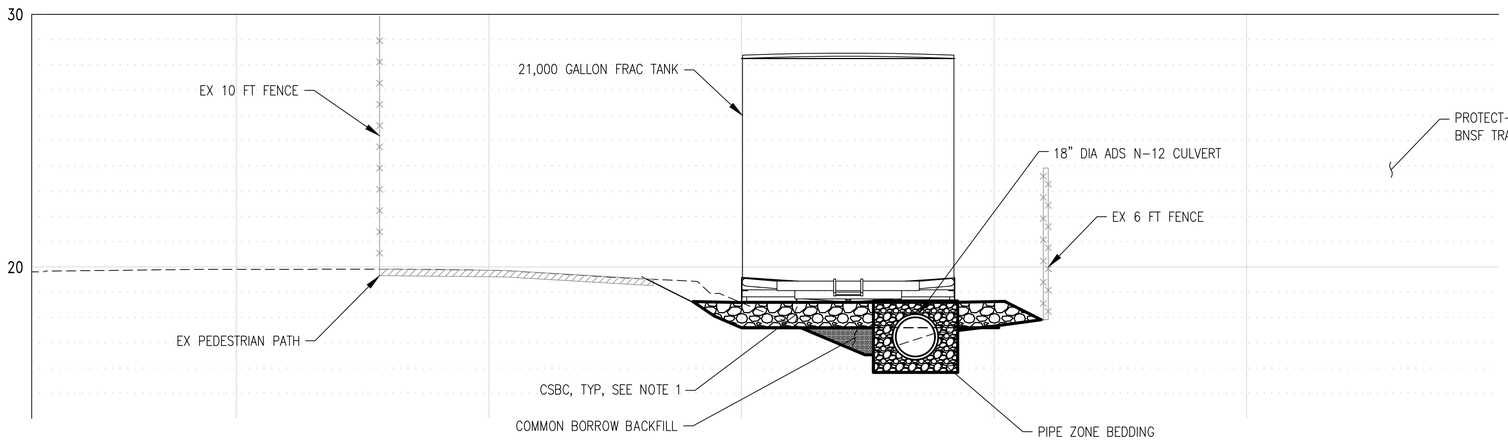
RECORD DRAWING



A SECTION – FLOWSPLITTER 1-C
C3.01 | C3.25 NOT TO SCALE



B SECTION – FLOWSPLITTER 1-B
C3.02 | C3.25 NOT TO SCALE



C SECTION – FLOWSPLITTER 4-B
C3.03 | C3.25 NOT TO SCALE

NOTES

1. CSBC COMPACTED TO MINIMUM 95% OF MAXIMUM DENSITY. REUSE OF ON-SITE CSBC IS ALLOWED IF IT CONFORMS WITH THE SPECIFICATION FOR CSBC AND IS APPROVED FOR REUSE BY THE ENGINEER.

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS

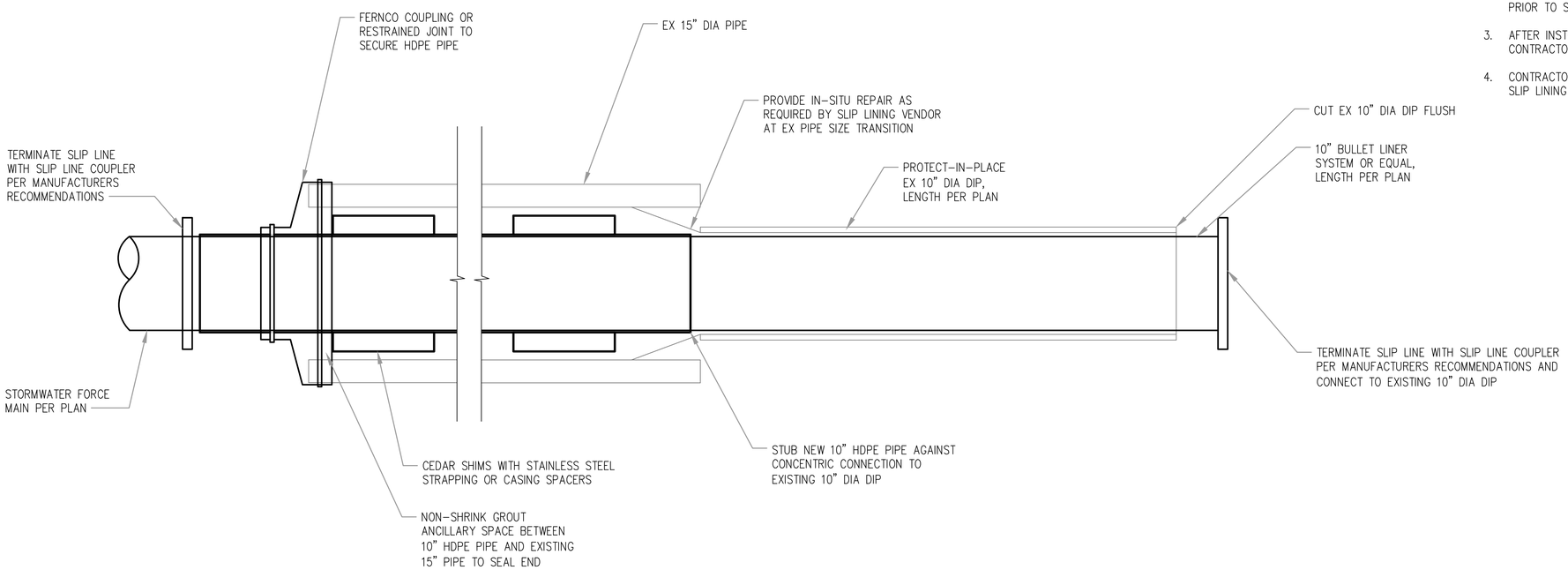
FLOWSPLITTER SECTIONS

DWG. NO. **C3.25**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 29 OF 42

RECORD DRAWING

NOTES

1. CONTRACTOR SHALL VIDEO LINE TO ENSURE PUSHED IN HDPE PIPE CLOSELY ABUTS TO EXISTING 10" DIA DIP JOINT.
2. CONTRACTOR SHALL CLEAN HDPE AND EXISTING 10" DIA DIP PIPE PRIOR TO SLIP LINING.
3. AFTER INSTALLATION OF SLIP LINE LINER AND CURING IS COMPLETE, CONTRACTOR SHALL PRESSURE TEST LINE TO ENSURE NO LEAKS.
4. CONTRACTOR SHALL INSTALL SLIP LINE COUPLINGS COMPATIBLE WITH SLIP LINING MATERIAL.



1 SLIP LINING DETAIL
C3.02 | C3.26 NOT TO SCALE

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
0	03/14/2025	NAW	RECORD DRAWING

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

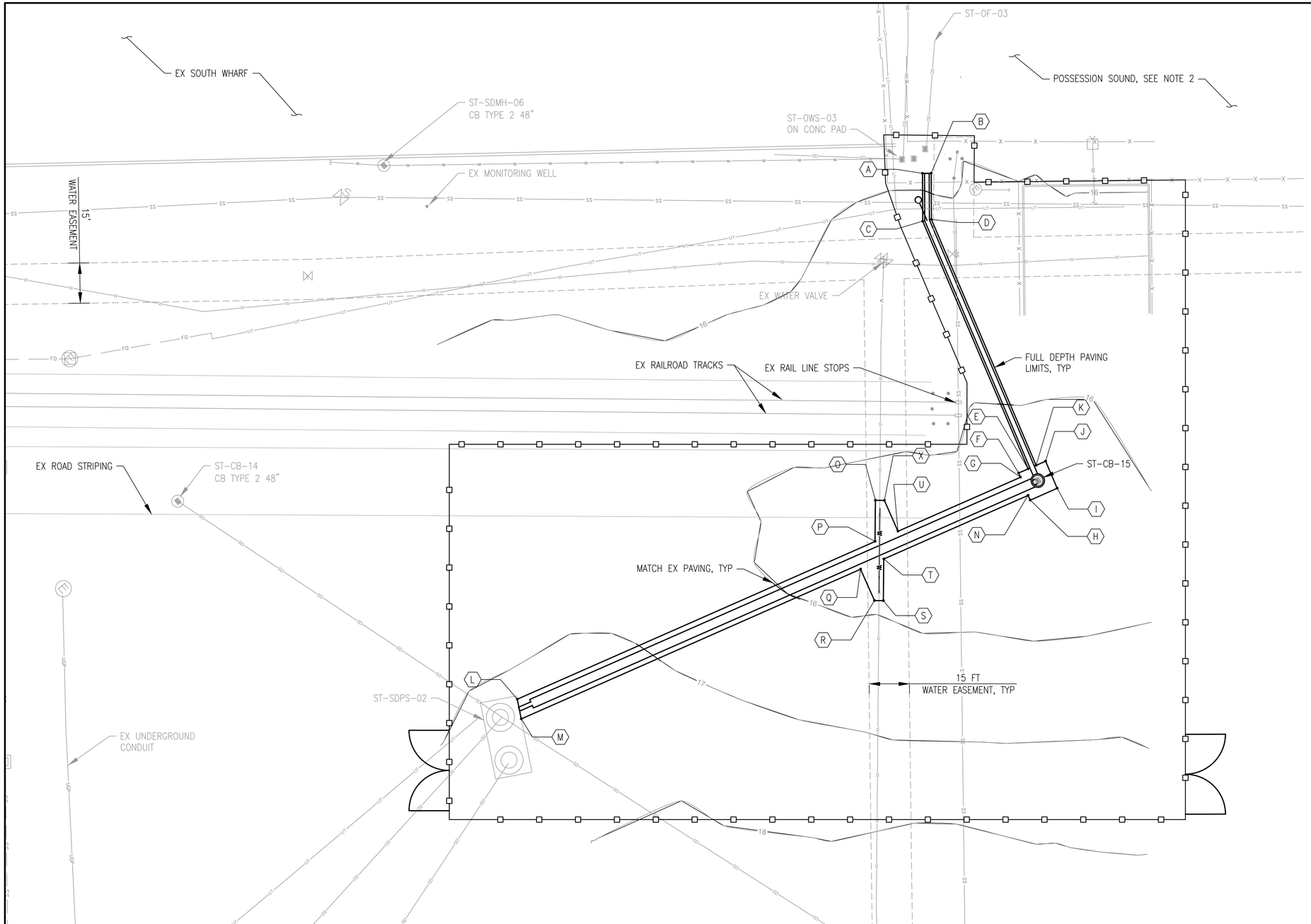
PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS

SLIP LINING DETAIL

DWG. NO. **C3.26**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 30 OF 42

RECORD DRAWING



GRADING AND PAVING PLAN – ST-OF-03 TO ST-SDPS-02

SCALE: 1" = 20'

NOTES

1. MAINTAIN EXISTING FLOW LINES AND HIGH "RIDGE" ELEVATIONS UNLESS NOTED OTHERWISE. ESTABLISH GRADES FOR FLOW LINE AND RIDGES PRIOR TO PAVING. MATCH FLUSH WITH EXISTING AND SLOPE TO DRAIN.
2. CONTRACTOR SHALL NOT PERFORM ANY WORK BELOW MEAN HIGHER HIGH WATER. ALL WORK SHALL BE PERFORMED IN THE UPLAND AREA. IN-WATER WORK IS PROHIBITED.

LEGEND

SD — STORM DRAIN

PROPERTY BOUNDARY

FULL DEPTH SAWCUT LIMIT

1
C4.00 C4.20

HORIZONTAL CONTROL POINT

POINT	NORTHING	EASTING	ELEVATION
A	358598.08	1298981.85	15.88
B	358600.62	1298983.89	15.88
C	358586.90	1298995.80	16.26
D	358589.84	1298997.32	16.23
E	358559.16	1299092.29	15.66
F	358555.43	1299091.26	15.68
G	358554.96	1299092.91	15.67
H	358552.39	1299101.83	15.60
I	358563.00	1299104.75	15.62
J	358566.04	1299094.18	15.67
K	358562.30	1299093.15	15.64
L	358358.67	1299034.17	17.19
M	358356.57	1299041.19	17.30
N	358552.93	1299099.95	15.60
O	358507.53	1299065.46	15.67
P	358497.76	1299077.27	15.60
Q	358487.04	1299081.94	15.59
R	358483.67	1299094.26	15.87
S	358486.24	1299096.39	15.88
T	358496.16	1299084.43	15.58
U	358506.79	1299079.74	15.57
V	NOT USED		
W	NOT USED		
X	358510.11	1299067.60	15.66

PROJECT NORTH

20' 0 20' 40'
10' 30'
SCALE: 1"=20'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. Box 4272
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

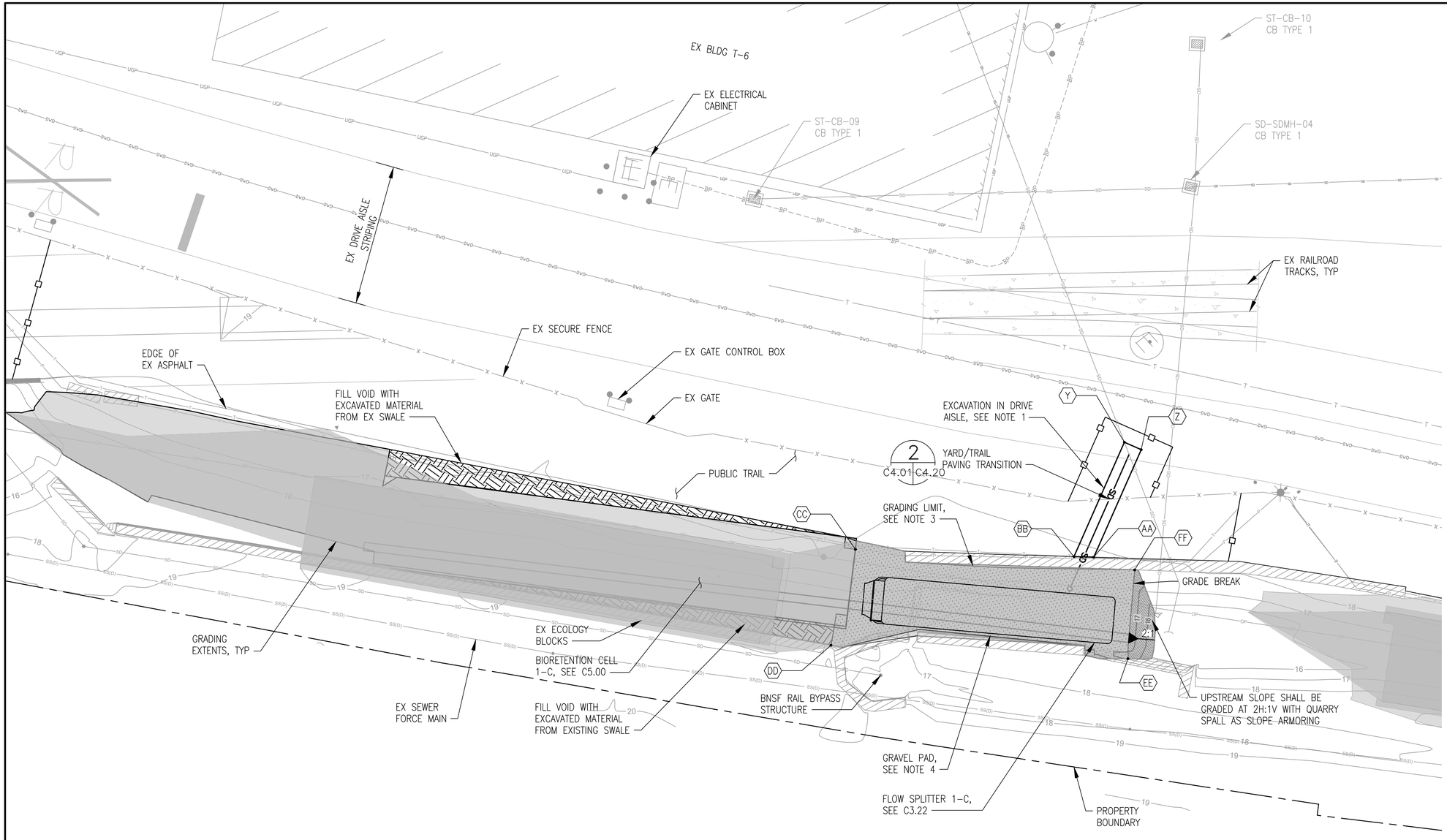
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
GRADING AND PAVING PLAN
ST-OF-03 TO ST-SDPS-02

DWG. NO. **C4.00**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 31 OF 42

RECORD DRAWING



NOTES

1. PHASE THE SECURE FENCING AND TRENCH EXCAVATION TO ALLOW FOR TRAFFIC TO PASS THROUGH THE DRIVE AISLE. CONTRACTOR SHALL BACKFILL AND PAVE NON-FENCED AREA TRENCH AT THE END OF THE WORK SHIFT, UNLESS ANCHORED METAL PLATES ARE PROVIDED FOR TEMPORARY VEHICLE ACCESS. COORDINATE CLOSURES WITH PORT.
2. DRIVE AISLE MUST MAINTAIN A 15 LF MINIMUM CLEARANCE. A FLAGGER IS REQUIRED TO MAINTAIN THE DRIVE AISLE.
3. CONTRACTOR SHALL PROVIDE HYDROSEED TO ALL DISTURBED AREA WITH BARE SOIL.
4. CONTRACTOR SHALL PROVIDE A MIN 12" THICKNESS CSBC LEVEL SURFACE TO PLACE FLOW SPLITTER VAULT. SURFACE SHALL BE COMPACTED TO A MINIMUM 95% DRY DENSITY PER SPECIFICATIONS. THE LEVEL SURFACE SHALL HAVE A 2H:1V SLOPE TO MATCH TRAIL AND SWALE EXISTING GRADE, EXCEPT FOR LOCATIONS WHERE NEW OR EXISTING ECO BLOCK WALLS ARE PLACED.
5. MAINTAIN EXISTING FLOW LINES AND HIGH "RIDGE" ELEVATIONS UNLESS NOTED OTHERWISE. ESTABLISH GRADES FOR FLOW LINE AND RIDGES PRIOR TO PAVING. MATCH FLUSH WITH EXISTING AND SLOPE TO DRAIN.
6. MATERIAL SHALL BE FROM THE SWALE ONLY. HYDROSEED BARE SURFACE AT THE END OF CONSTRUCTION

LEGEND

- PROPERTY BOUNDARY
- FULL DEPTH SAWUCT LIMIT — 2 C4.01 C4.20
- SD — STORM DRAIN
- BIORETENTION CELL
- CSBC/QUARRY SPALLS SURFACING — 3 C4.01 C4.20
- NATIVE MATERIAL FILL, SEE NOTE 6

HORIZONTAL CONTROL POINT

POINT	NORTHING	EASTING	ELEVATION
Y	357779.53	1299005.82	NO DATA
Z	357782.70	1299006.85	NO DATA
AA	357774.64	1299031.60	17.97
BB	357771.90	1299029.23	17.95
CC	357730.44	1298993.24	17.59
DD	357716.10	1299003.89	17.59
EE	357756.16	1299039.59	17.59
FF	357767.21	1299027.91	17.59

PROJECT NORTH

10' 0 10' 20'
5' 15'
SCALE: 1"=10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

GRADING AND PAVING PLAN – BIORETENTION TREATMENT 1-C

SCALE: 1" = 10'

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

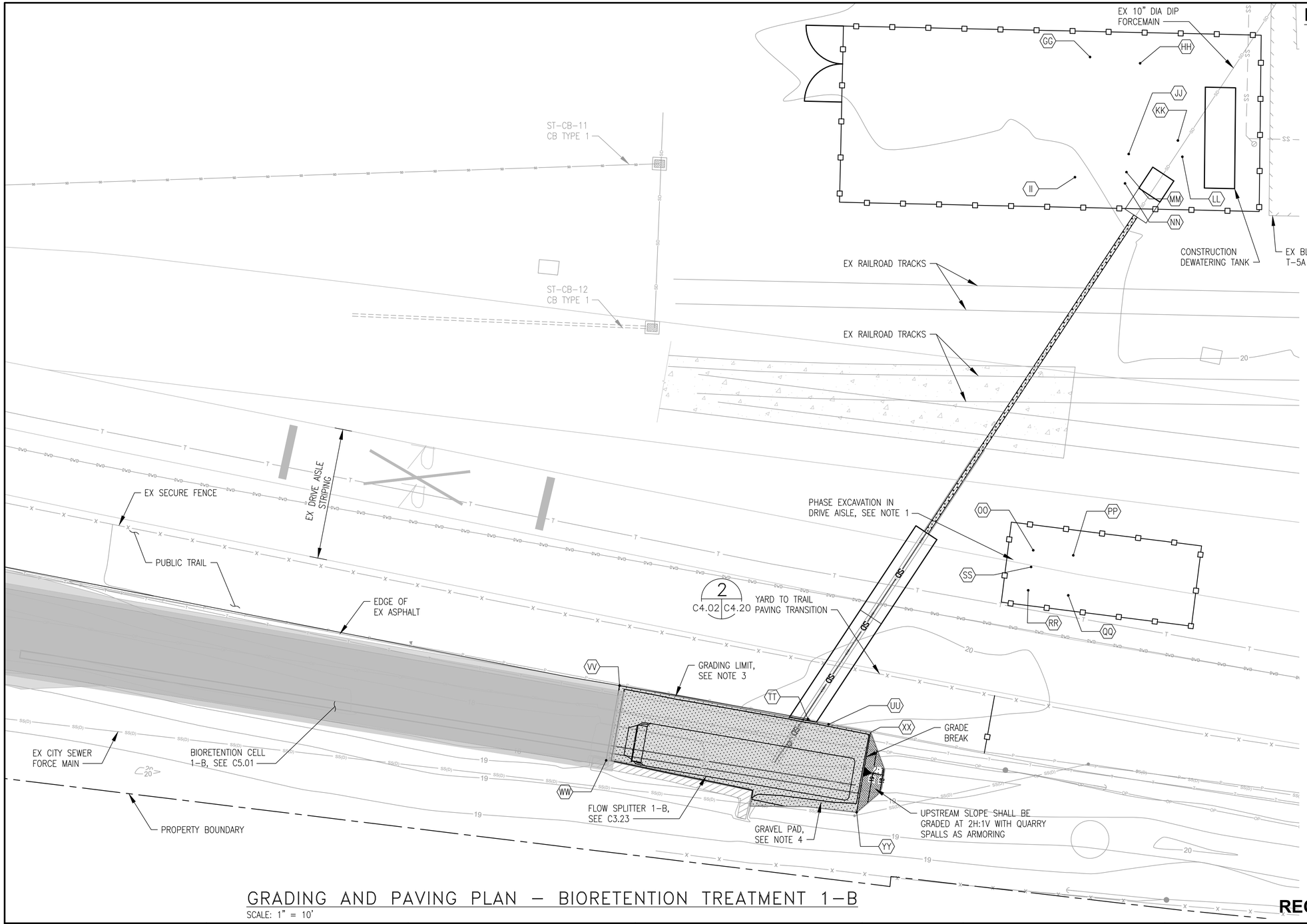
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
GRADING AND PAVING PLAN
BIORETENTION TREATMENT 1-C

DWG. NO. **C4.01**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 32 OF 42

RECORD DRAWING



NOTES

1. PHASE THE SECURE FENCING AND TRENCH EXCAVATION TO ALLOW FOR TRAFFIC TO PASS THROUGH THE DRIVE AISLE. CONTRACTOR SHALL BACKFILL AND PAVE NON-FENCED AREA TRENCH AT THE END OF THE WORK SHIFT, UNLESS ANCHORED METAL PLATES ARE PROVIDED FOR TEMPORARY VEHICLE ACCESS. COORDINATE CLOSURES WITH PORT.
2. DRIVE AISLE MUST MAINTAIN A 15 LF MINIMUM CLEARANCE. A FLAGGER IS REQUIRED TO MAINTAIN THE DRIVE AISLE.
3. CONTRACTOR SHALL PROVIDE HYDROSEED TO ALL DISTURBED AREA WITH BARE SOIL.
4. CONTRACTOR SHALL PROVIDE A MIN 12" THICKNESS CSBC LEVEL SURFACE TO PLACE FLOW SPLITTER VAULT. SURFACE SHALL BE COMPACTED TO A MINIMUM 95% DRY DENSITY PER SPECIFICATIONS. THE LEVEL SURFACE SHALL HAVE A 2k:1v SLOPE TO MATCH TRAIL AND SWALE EXISTING GRADE, EXCEPT FOR LOCATIONS WHERE NEW OR EXISTING ECO BLOCK WALLS ARE PLACED.
5. MAINTAIN EXISTING FLOW LINES AND HIGH "RIDGE" ELEVATIONS UNLESS NOTED OTHERWISE. ESTABLISH GRADES FOR FLOW LINE AND RIDGES PRIOR TO PAVING. MATCH FLUSH WITH EXISTING AND SLOPE TO DRAIN.

LEGEND

PROPERTY BOUNDARY

FULL DEPTH SAWCUT LIMIT — 2 / C4.02 C4.20

STORM DRAIN — SD

BIORETENTION CELL

CSBC/QUARRY SPALLS SURFACING — 3 / C4.02 C4.20

HORIZONTAL CONTROL POINT

POINT	NORTHING	EASTING	ELEVATION
GG	358037.72	1299124.01	20.21
HH	358044.63	1299131.23	20.22
II	358020.38	1299140.61	19.95
JJ	358031.54	1299143.77	20.15
KK	358040.79	1299147.83	20.20
LL	358039.45	1299150.89	20.18
MM	358028.93	1299146.27	20.11
NN	358027.30	1299147.83	20.08
OO	357967.30	1299192.80	19.70
PP	357972.84	1299198.58	19.73
QQ	357967.06	1299204.11	19.85
RR	357961.53	1299198.33	19.82
SS	357964.90	1299195.10	19.75
TT	357911.55	1299190.60	20.05
UU	357914.05	1299193.99	20.01
VV	357886.74	1299161.91	19.92
WW	357875.36	1299171.71	19.92
XX	357919.54	1299200.48	19.92
YY	357907.38	1299211.04	19.92

PROJECT NORTH

10' 0 10' 20'

5' 15'

SCALE: 1"=10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWING

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

GRADING AND PAVING PLAN – BIORETENTION TREATMENT 1-B

SCALE: 1" = 10'

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
GRADING AND PAVING PLAN
BIORETENTION TREATMENT 1-B

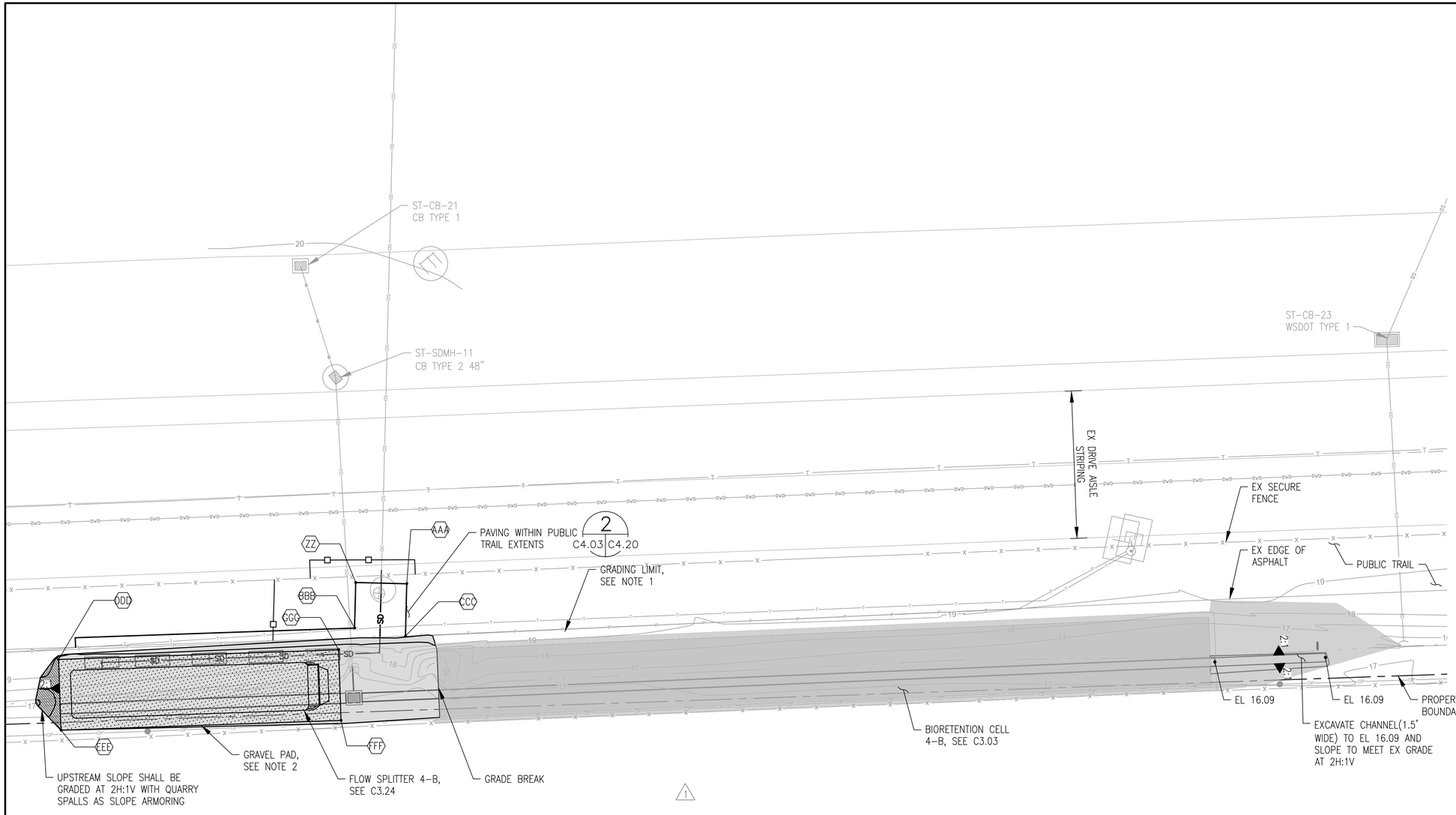
DWG. NO. **C4.02**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 33 OF 42

RECORD DRAWING



NOTES

1. CONTRACTOR SHALL PROVIDE HYDROSEED TO ALL DISTURBED AREA WITH BARE SOIL.
2. CONTRACTOR SHALL PROVIDE A MIN 12" THICKNESS CSBC LEVEL SURFACE TO PLACE FLOW SPLITTER VAULT. SURFACE SHALL BE COMPACTED TO A MINIMUM 95% DRY DENSITY PER SPECIFICATIONS. THE LEVEL SURFACE SHALL HAVE A 2k:1v SLOPE TO MATCH TRAIL AND SWALE EXISTING GRADE, EXCEPT FOR LOCATIONS WHERE NEW OR EXISTING ECO BLOCK WALLS ARE PLACED.
3. MAINTAIN EXISTING FLOW LINES AND HIGH "RIDGE" ELEVATIONS UNLESS NOTED OTHERWISE. ESTABLISH GRADES FOR FLOW LINE AND RIDGES PRIOR TO PAVING. MATCH FLUSH WITH EXISTING AND SLOPE TO DRAIN.

LEGEND

PROPERTY BOUNDARY

FULL DEPTH SAWCUT LIMIT — 2 / C4.03 C4.20

STORM DRAIN — SD

BIORETENTION CELL

CSBC/QUARRY SPALLS SURFACING — 3 / C4.03 C4.20

HORIZONTAL CONTROL POINT

POINT	NORTHING	EASTING	ELEVATION
ZZ	358558.79	1299742.88	ME
AAA	358565.64	1299748.71	ME
BBB	358553.58	1299748.97	ME
CCC	358559.64	1299755.73	ME
DDD	358509.62	1299720.39	18.64
EEE	358502.11	1299730.32	18.64
FFF	358541.47	1299760.09	18.64
GGG	358548.98	1299750.16	18.64

PROJECT NORTH

10' 0 10' 20'

5' 15'

SCALE: 1"=10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

GRADING AND PAVING PLAN – BIORETENTION TREATMENT 4-B

SCALE: 1" = 10'

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
2	03/14/2025	NAW	RECORD DRAWING
1	10/09/2024	ECN	FIELD ORDER #3
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

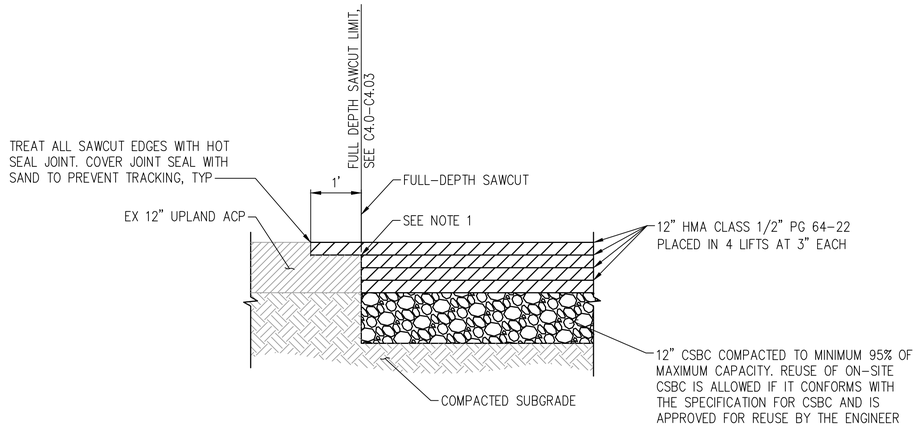
RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT
MARINE TERMINALS
STORMWATER IMPROVEMENTS
GRADING AND PAVING PLAN
BIORETENTION TREATMENT 4-B

DWG. NO. **C4.03**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 34 OF 42

RECORD DRAWING

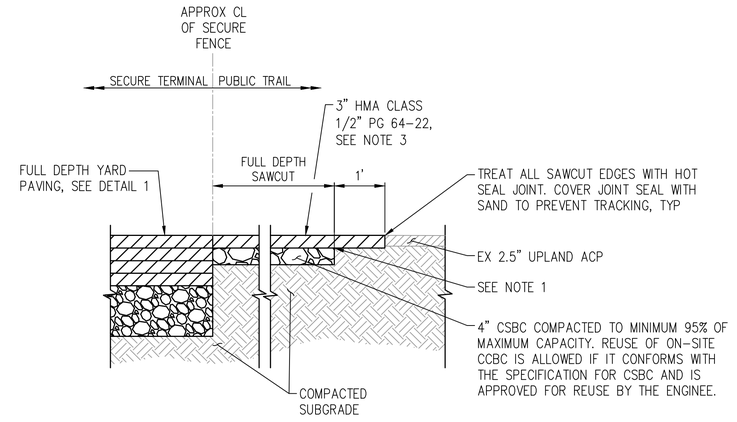


NOTES:

1. COLD PLANE BITUMINOUS ASPHALT 3" DEEP FOR A MINIMUM WIDTH OF 12" TO CREATE A 12" MINIMUM OVERLAP BETWEEN ALL NEW ACP REPLACEMENT AND EXISTING ACP PAVEMENT. LEVEL AND SEAL ALL CRACKS PRIOR TO PAVING IF FOUND WITHIN THE COLD PLANE LIMITS PER THE SPECIFICATIONS.

1 DETAIL – YARD PAVING

C4.00, C4.01, C4.02, C4.03 C3.20 SCALE: NTS

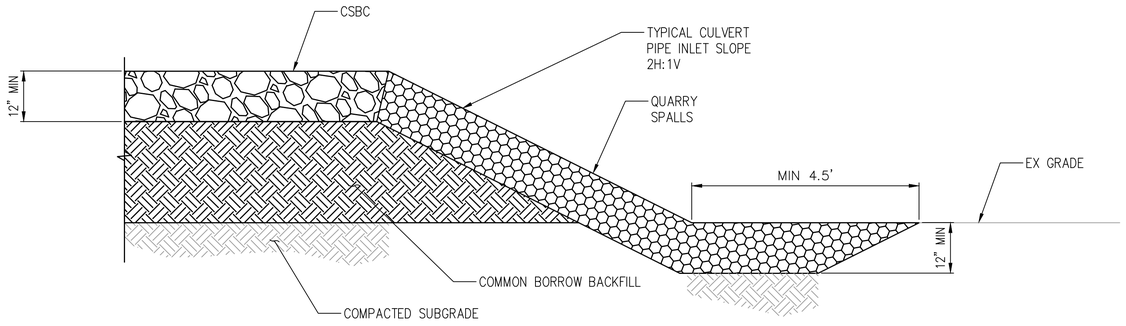


NOTES:

1. COLD PLANE BITUMINOUS ASPHALT 3" DEEP FOR A MINIMUM WIDTH OF 12" TO CREATE A 12" MINIMUM OVERLAP BETWEEN ALL NEW ACP REPLACEMENT AND EXISTING ACP PAVEMENT. LEVEL AND SEAL ALL CRACKS PRIOR TO PAVING IF FOUND WITHIN THE COLD PLANE LIMITS PER THE SPECIFICATIONS.
2. PEDESTRIAN WALKWAY MUST BE CONSTRUCTED IN ACCORDANCE WITH SNOHOMISH COUNTY DESIGN AND CONSTRUCTION STANDARDS.
3. WHERE PAVEMENT CROSSES TERMINAL BOUNDARY, INSTALL A CONTINUOUS FINAL LIFT.

2 DETAIL – YARD/TRAIL PAVING TRANSITION

C4.01, C4.02, C4.03 C3.20 SCALE: NTS



3 DETAIL – QUARRY SPALLS

C4.01, C4.02, C4.03 C4.20 SCALE: NTS

RECORD DRAWING IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of Everett
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
1	03/14/2025	NAW	RECORD DRAWING
0	05/24/2024	NAW	BID SET

NO.	DATE	BY	REVISION

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

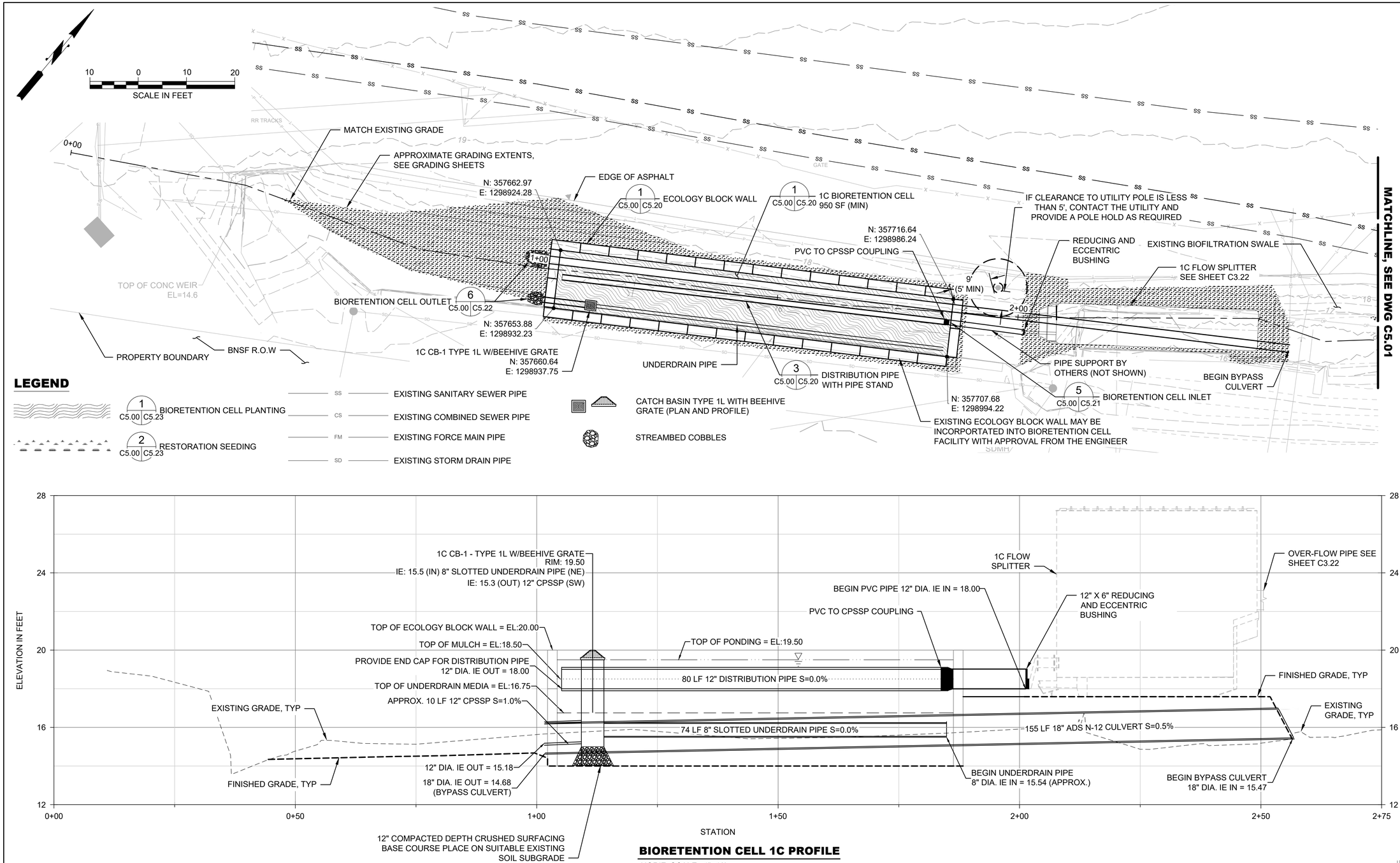
PROJECT ENGINEER: E. NIELSEN	SCALE: AS SHOWN
DESIGNED BY: K. KONG/M. MARTINDALE	DATE: 05/24/2024
DRAWN BY: M. MARTINDALE/D. YU	CHECKED BY: E. NIELSEN
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
GRADING AND PAVING
DETAILS

DWG. NO. **C4.20**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 35 OF 42

RECORD DRAWING



BIORETENTION CELL 1C PROFILE

HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=2.5'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

RECORD DRAWING

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

HERRERA
Science + Planning + Design
herrerainc.com

NO.	DATE	BY	REVISION
2	03/14/2025	CJW	RECORD DRAWINGS
1	09/20/2024	CJW	FIELD ORDER #2
0	05/24/2024	CJW	CONSTRUCTION SET

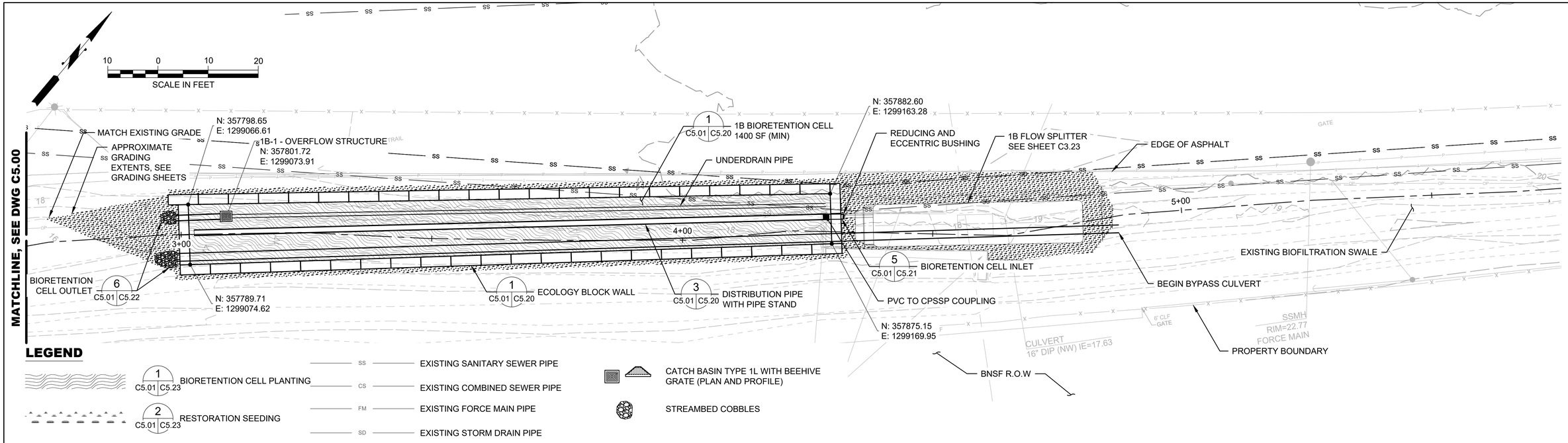
RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

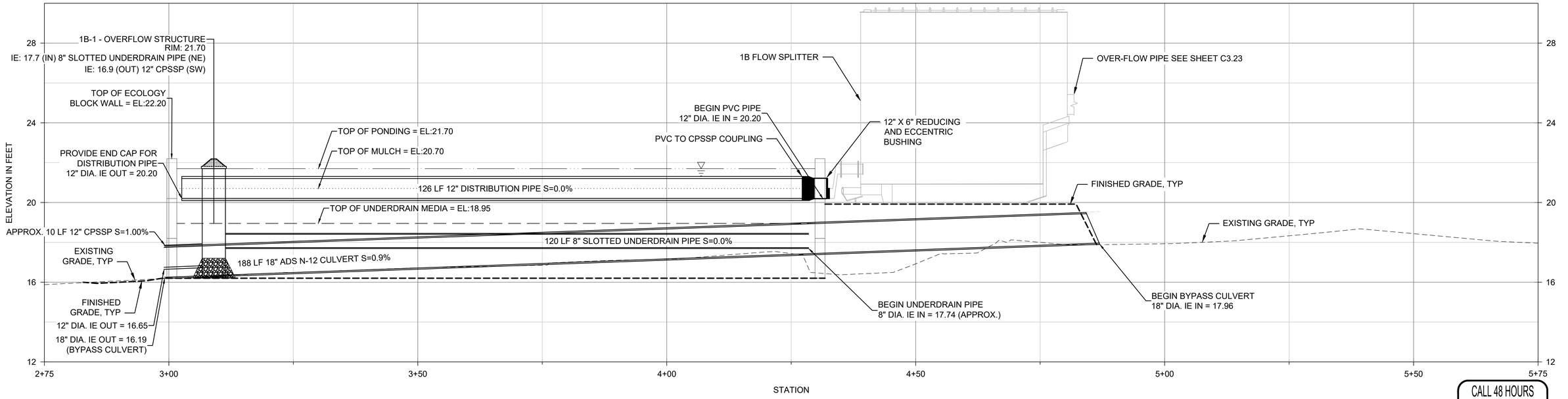
PROJECT ENGINEER: J. ELROD	SCALE: AS SHOWN
DESIGNED BY: J. OGINTZ	DATE: 05/10/2024
DRAWN BY: M. MCCARTHY	CHECKED BY: C. WEBB
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
TREATMENT SYSTEM
BIORETENTION 1-C

DWG. NO. **C5.00**
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 35 OF 41





BIORETENTION CELL 1B PROFILE

HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=2.5'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

RECORD DRAWING

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

HERRERA
Science + Planning + Design
herrerainc.com

NO.	DATE	BY	REVISION
2	03/14/2025	CJW	RECORD DRAWINGS
1	09/23/2024	CJW	FIELD ORDER #2
0	05/24/2024	CJW	CONSTRUCTION SET

NO.	DATE	BY	REVISION

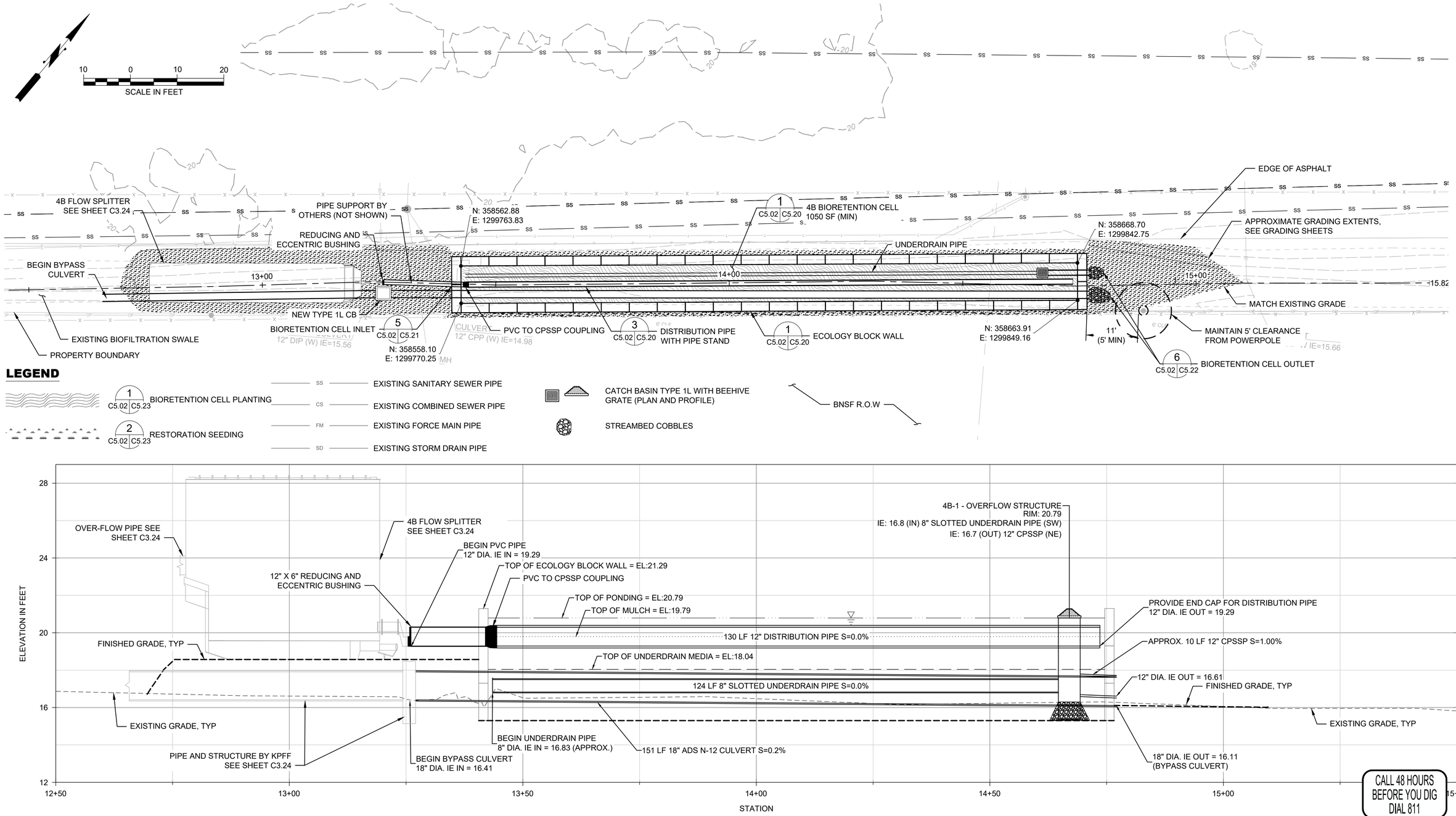
RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: J. ELROD	SCALE: AS SHOWN
DESIGNED BY: J. OGINTZ	DATE: 05/10/2024
DRAWN BY: M. MCCARTHY	CHECKED BY: C. WEBB
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
TREATMENT SYSTEM
BIORETENTION 1-B

DWG. NO. C5.01
CIP NO. 1-0-060-01
PROJECT NO. MT-ST-2024-03
SHEET NO. 36 OF 41



BIORETENTION CELL 4B PROFILE

HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=2.5'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

RECORD DRAWING

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

HERRERA
Science + Planning + Design
herrerainc.com

NO.	DATE	BY	REVISION
2	03/14/2025	CJW	RECORD DRAWINGS
1	10/09/2024	CJW	FIELD ORDER #5
0	05/24/2024	CJW	CONSTRUCTION SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: J. ELROD	SCALE: AS SHOWN
DESIGNED BY: J. OGINTZ	DATE: 05/10/2024
DRAWN BY: M. MCCARTHY	CHECKED BY: C. WEBB
APPROVED BY:	

PORT OF EVERETT

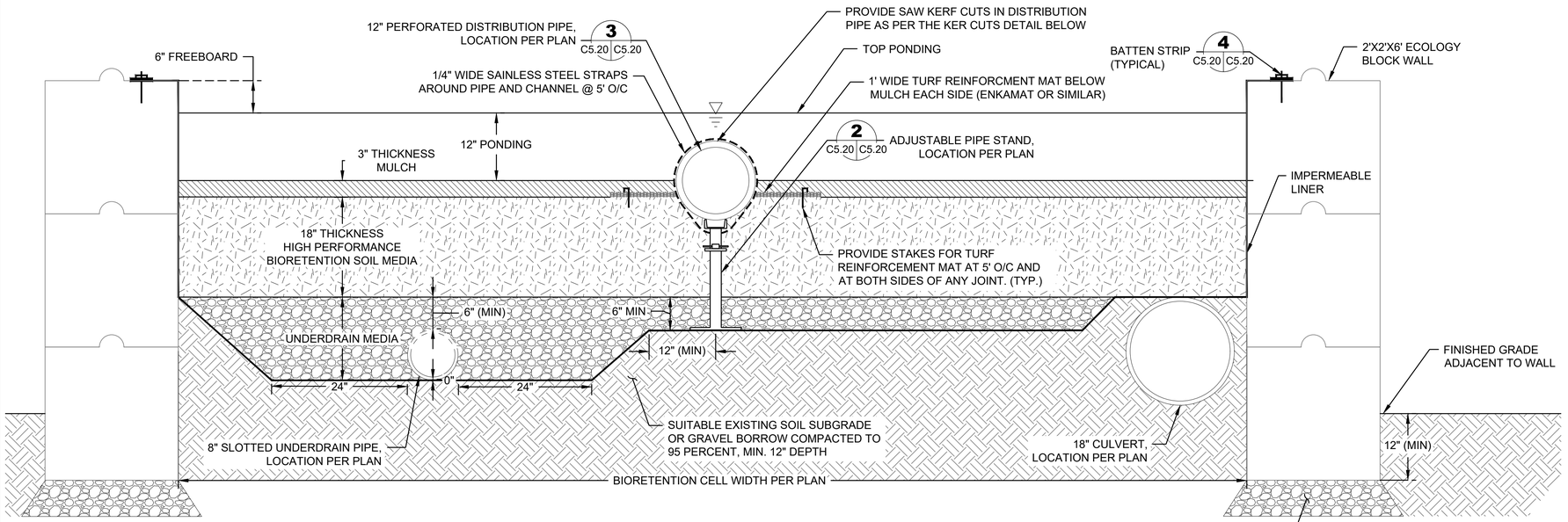
MARINE TERMINALS
STORMWATER IMPROVEMENTS
TREATMENT SYSTEM
BIORETENTION 4-B

DWG. NO. **C5.02**

CIP NO. 1-0-060-01

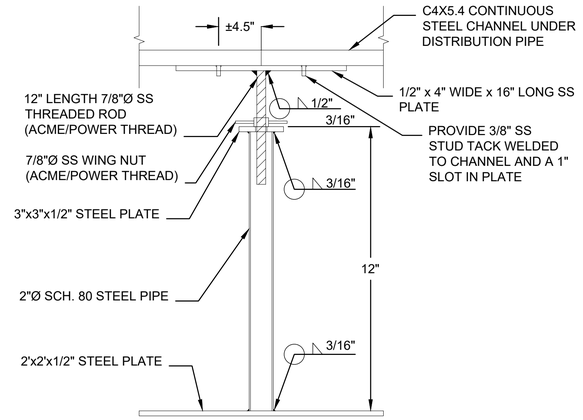
PROJECT NO. MT-ST-2024-03

SHEET NO. 37 OF 41



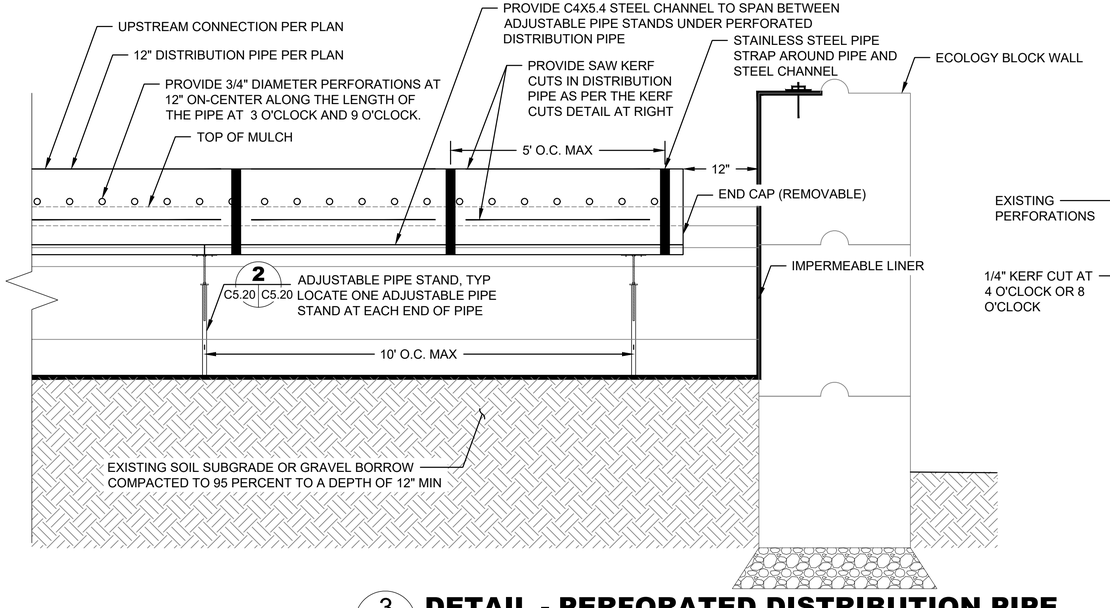
1 DETAIL - BIORETENTION CELL SECTION

C5.00 C5.20 SCALE: NTS



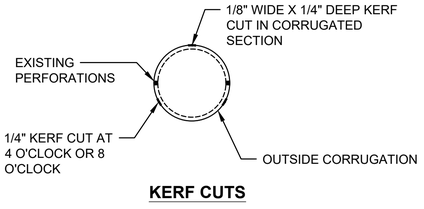
2 DETAIL - ADJUSTABLE PIPE STAND

C5.20 C5.20 SCALE: NTS

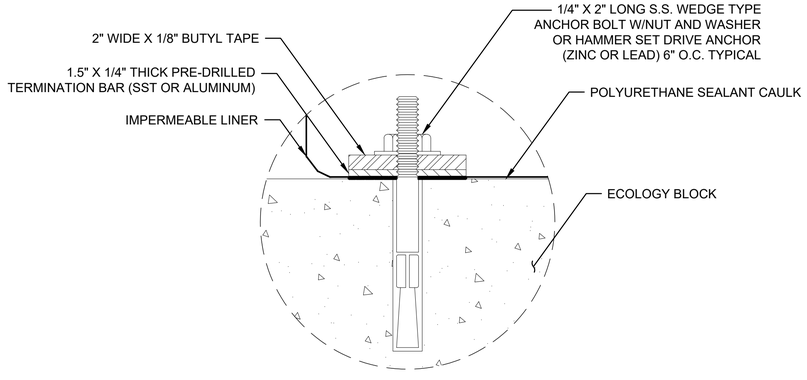


3 DETAIL - PERFORATED DISTRIBUTION PIPE

C5.00 C5.20 SCALE: NTS



KERF CUTS



4 DETAIL - BATTEN STRIP CONNECTION TYPICAL

C5.20 C5.20 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

RECORD DRAWING

Port of Everett
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

HERRERA
Science + Planning + Design
herrerainc.com

NO.	DATE	BY	REVISION
1	03/14/2025	CJW	RECORD DRAWINGS
0	05/24/2024	CJW	CONSTRUCTION SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: J. ELROD	SCALE: AS SHOWN
DESIGNED BY: J. OGINTZ	DATE: 05/10/2024
DRAWN BY: M. MCCARTHY	CHECKED BY: C. WEBB
APPROVED BY:	

PORT OF EVERETT

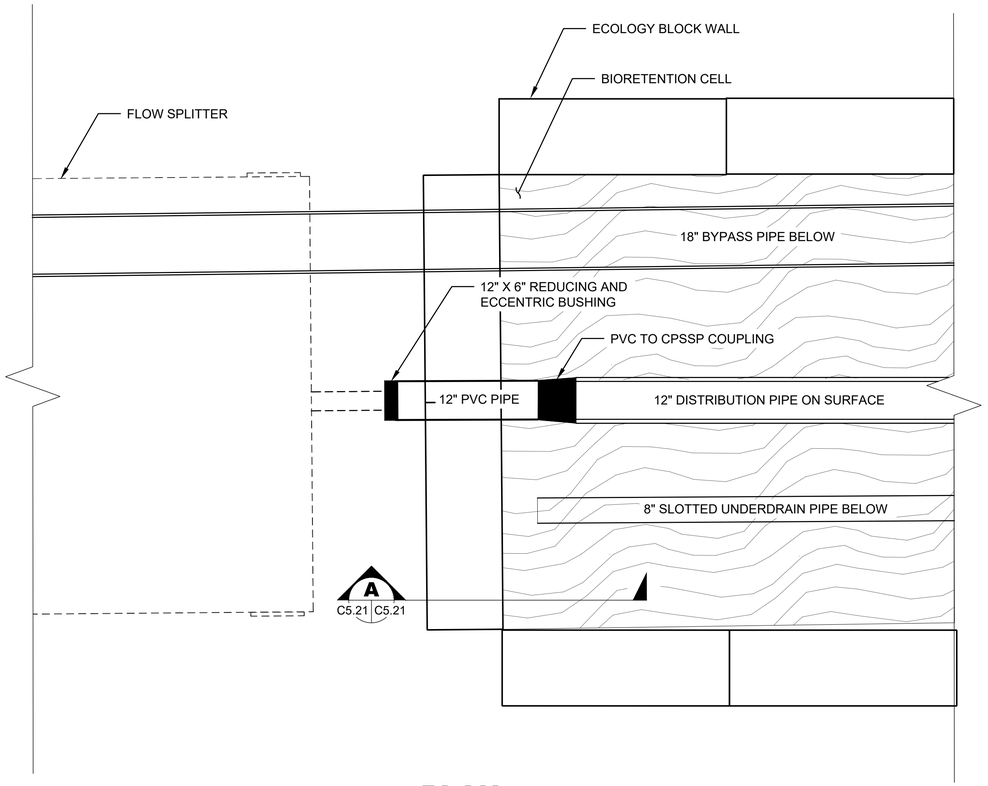
MARINE TERMINALS
STORMWATER IMPROVEMENTS
TREATMENT SYSTEM
BIORETENTION DETAILS 1

DWG. NO. **C5.20**

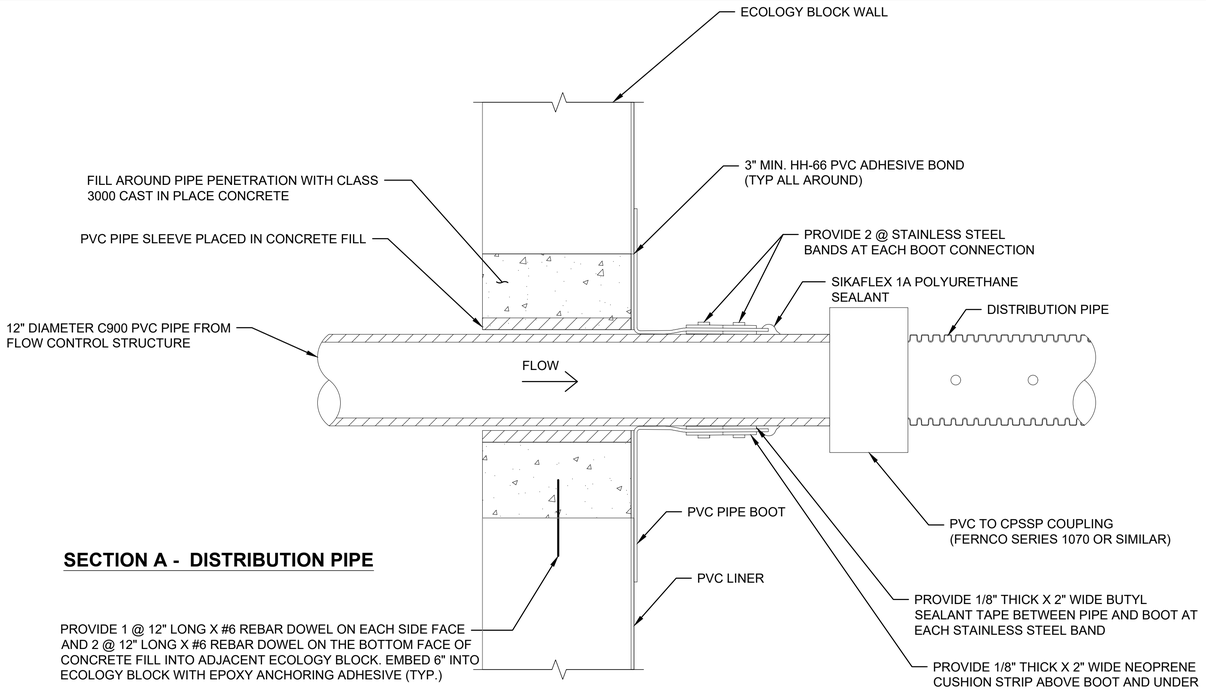
CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

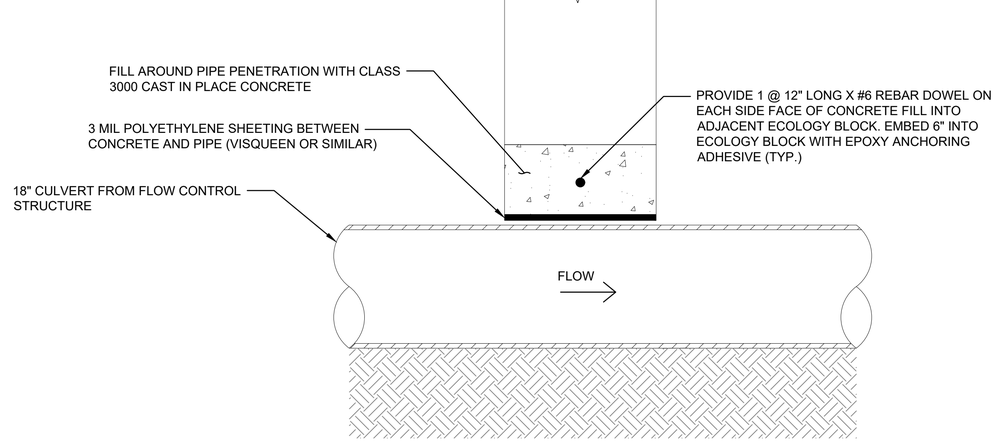
SHEET NO. 38 OF 41



PLAN



SECTION A - DISTRIBUTION PIPE



SECTION A - BYPASS CULVERT

5 DETAIL - BIORETENTION CELL INLET

C5.00 C5.21 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

RECORD DRAWING

Port of Everett
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

HERRERA
Science + Planning + Design
herrerainc.com

NO.	DATE	BY	REVISION
1	03/14/2025	CJW	RECORD DRAWINGS
0	05/24/2024	CJW	CONSTRUCTION SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: J. ELROD	SCALE: AS SHOWN
DESIGNED BY: J. OGINTZ	DATE: 05/10/2024
DRAWN BY: M. MCCARTHY	CHECKED BY: C. WEBB
APPROVED BY:	

PORT OF EVERETT

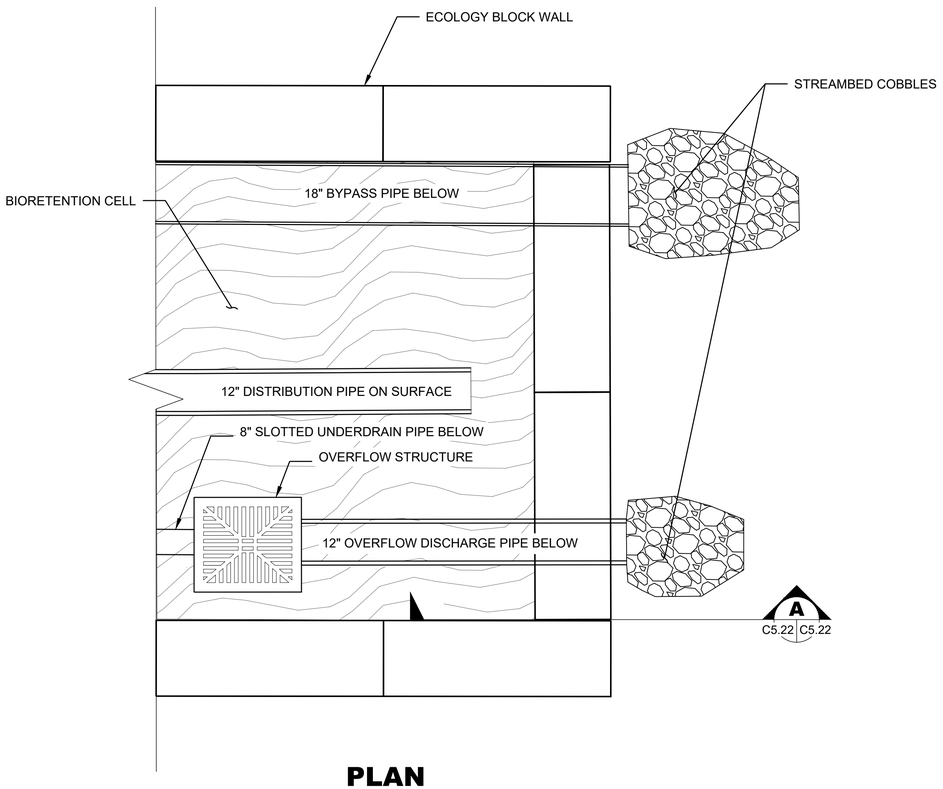
MARINE TERMINALS
STORMWATER IMPROVEMENTS
TREATMENT SYSTEM
BIORETENTION DETAILS 2

DWG. NO. **C5.21**

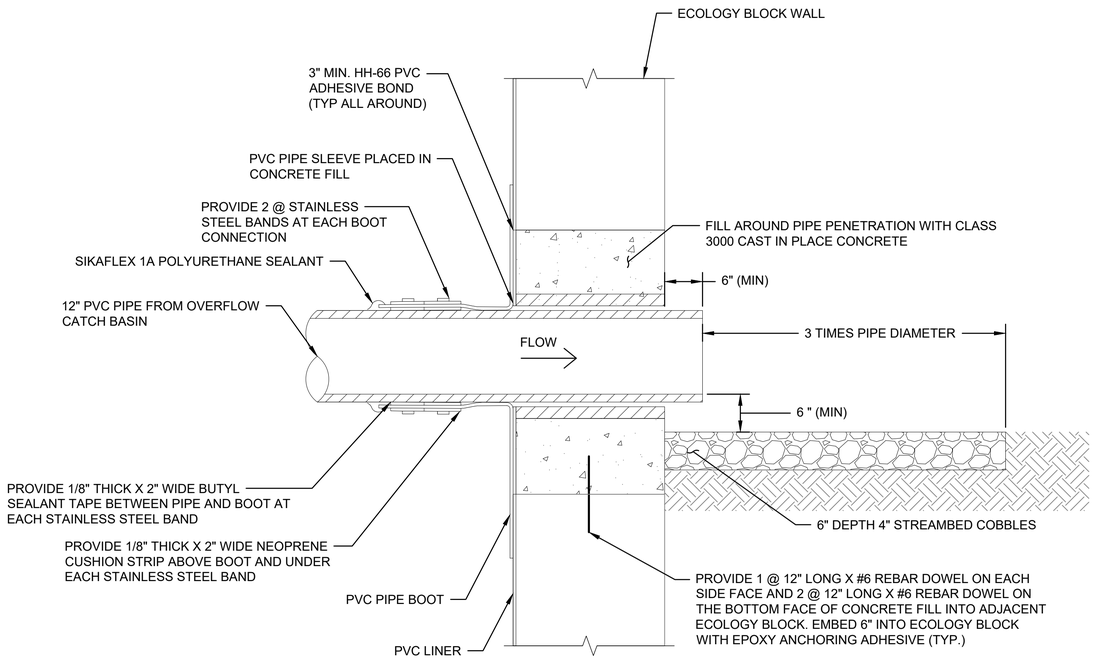
CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

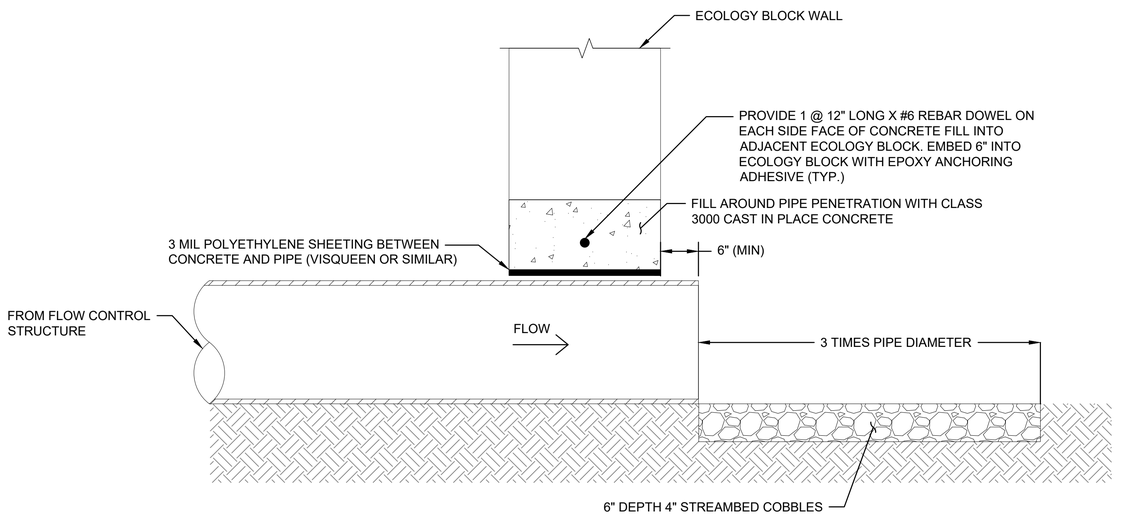
SHEET NO. 39 OF 41



PLAN



SECTION A - OVERFLOW DISCHARGE PIPE



SECTION A - BYPASS CULVERT

6 DETAIL - BIORETENTION CELL OUTLET

C5.00 | C5.22 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of Everett
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

HERRERA
Science + Planning + Design
herrerainc.com

NO.	DATE	BY	REVISION
1	03/14/2025	CJW	RECORD DRAWINGS
0	05/24/2024	CJW	CONSTRUCTION SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: J. ELROD	SCALE: AS SHOWN
DESIGNED BY: J. OGINTZ	DATE: 05/10/2024
DRAWN BY: M. MCCARTHY	CHECKED BY: C. WEBB
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
TREATMENT SYSTEM
BIORETENTION DETAILS 3

DWG. NO. **C5.22**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 40 OF 41

RECORD DRAWING

PLANT SCHEDULE						
PLANT SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	CONDITION	SPACING	NOTES
CAR OBN	507	CAREX OBNUPTA	SLOUGH SEDGE	BARE ROOT STOCK	24" On Center Triangular	PLANT IN DRIFTS OF 3-9
JUN PAT	507	JUNCUS PATENS	CALIFORNIA GRAY RUSH	BARE ROOT STOCK	24" On Center Triangular	PLANT IN DRIFTS OF 3-9

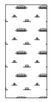
PLANT DISTRIBUTION BY BIORETENTION CELL					
SYMBOL	ESTIMATED TOTAL AREA	CELL	QUANTITY	BOTANICAL NAME	COMMON NAME
	3500 SF	1B	211	CAR OBN	SLOUGH SEDGE
			211	JUN PAT	CALIFORNIA GRAY RUSH
		1C	137	CAR OBN	SLOUGH SEDGE
			137	JUN PAT	CALIFORNIA GRAY RUSH
		4B	159	CAR OBN	SLOUGH SEDGE
			159	JUN PAT	CALIFORNIA GRAY RUSH

NOTES:

1. PLANT THE BIORETENTION PLANTS PER DETAILS 3 & 4 THIS SHEET.

1 BIORETENTION PLANT SCHEDULE

C5.00 | C5.23 SCALE: NTS

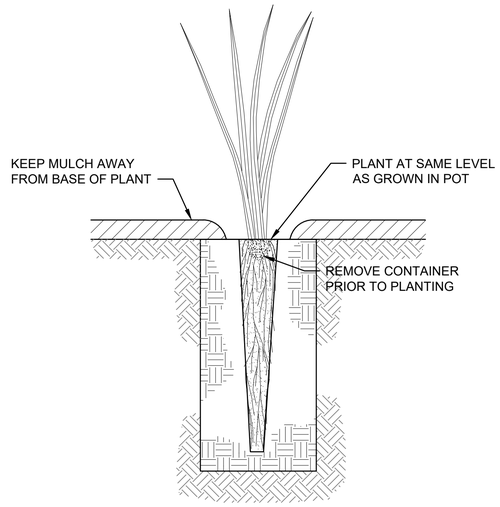
SEED MIX FOR RESTORATION OF BIOSWALE DISTURBANCE				
SYMBOL	ESTIMATED TOTAL AREA	BOTANICAL NAME	COMMON NAME	PERCENT OF SPECIES COVER
	3000 SF	ACHILLEA MILLEFOLIUM	COMMON YARROW	3%
		CLARKIA AMOENA	FAREWELL TO SPRING	3%
		ELYMUS GLAUCUS	BLUE WILD RYE	27%
		FESTUCA RUBRA VAR. RUBRA	RED FESCUE	25%
		GEUM MACROPHYLLUM	LARGE-LEAVED AVENS	2%
		KOELERIA MACRACANTHA	PRAIRIE JUNEGRASS	20%
		POA PLUSTRIS	FOWL BLUEGRASS	20%
		TOTAL		100%

NOTES:

1. REPLANT ALL DISTURBED SOIL WITH RESTORATION SEEDING.

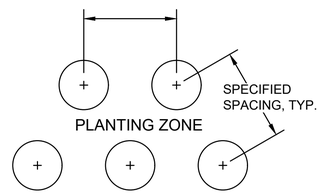
2 SITE RESTORATION SEED MIX

C5.00 | C5.23 SCALE: NTS



3 DETAIL - 10 INCH PLUG PLANTING

C5.23 | C5.23 SCALE: NTS



NOTES:

1. PLANT BARE ROOT AND PLUGS IN CLUSTERS OF THREE, FIVE, OR SEVEN PLANTS OF SAME SPECIES.
2. EVENLY SPACE CLUSTERS THROUGHOUT PLANTING AREA.
3. INTENT OF THE PLANTING IS TO APPEAR NATURAL AND INFORMAL. PLANTS SHOULD GROW INTO MASSINGS TO PROTECT SOIL AND PREVENT WEED ESTABLISHMENT.

4 DETAIL - GROUNDCOVER LAYOUT

C5.23 | C5.23 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

RECORD DRAWING

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

HERRERA
Science + Planning + Design
herrerainc.com

NO.	DATE	BY	REVISION
1	03/14/2025	CJW	RECORD DRAWINGS
0	05/24/2024	CJW	CONSTRUCTION SET

RECORD CONDITIONS ILLUSTRATED IN THESE PLANS REFLECT INFORMATION PROVIDED BY THE CONTRACTOR. RECORD CONDITIONS WERE NOT VERIFIED BY ENGINEER.

PROJECT ENGINEER: J. ELROD	SCALE: AS SHOWN
DESIGNED BY: J. OGINTZ	DATE: 05/10/2024
DRAWN BY: M. MCCARTHY	CHECKED BY: C. WEBB
APPROVED BY:	

PORT OF EVERETT

MARINE TERMINALS
STORMWATER IMPROVEMENTS
TREATMENT SYSTEM
RESTORATION DETAILS

DWG. NO. **C5.23**

CIP NO. 1-0-060-01

PROJECT NO. MT-ST-2024-03

SHEET NO. 41 OF 41

Appendix C

Waste Characterization Sample Laboratory Report

Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

27 September 2024

Abhijit R. Joshi
GeoEngineers
17425 Union Hill Road Suite 250
Redmond, WA 98052

RE: POE Marine Terminal SW Improvements (0676-020-07)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
24I0008	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC



Susan Dunnihoo, Director, Client Services

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Accredited in accordance with nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 24I0008	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: GEOENGINEERS	Phone: 206.239.3256	Date: 8.29.24	Ice Present? Y
Client Contact: ABHIJIT JOSHI		No. of Coolers: 1	Cooler Temps: 5.8
Client Project Name: POE MARINE TERMINAL SW IMPROVEMENTS			
Client Project #: 0676-020-07	Samplers: NATHAN SOLOMON		

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Metals	SVOC	PAH-SIM	PCB	TPHDx	Gx/VOC (BETX)	VOC (BETX)		Notes/Comments
SP-1-A	8.28.24	1305	SO	6	X	X	X	X	X	X	X		
SP-1-B		1310		6	X	X	X	X	X	X	X		
SP-1-C		1315		6	X	X	X	X	X	X	X		
SP-1-D		1320		6	X	X	X	X	X	X	X		
SP-1-E		1325		6	X	X	X	X	X	X	X		

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: NATHAN SOLOMON	Printed Name: Sydni Acevedo	Printed Name:	Printed Name:
	Company: GEI	Company: ARI	Company:	Company:
	Date & Time: 8.29.24 11:28	Date & Time: 8/29/24 1128	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 2410008	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: GEOENGINEERS	Phone: 206.239.3256	Date: 8.29.24	Ice Present? Y
Client Contact: ABHIJIT JOSHI		No. of Coolers: 1	Cooler Temps: 5.8
Client Project Name: POE MARINE TERMINAL SW IMPROVEMENTS			
Client Project #: 0676-020-07	Samplers: NATHAN SOLOMON		

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Dioxin/Furans	Notes/Comments
SP-1-A	8.28.24	1305	SOIL	1	X	
SP-1-B		1310		1	X	
SP-1-C		1315		1	X	
SP-1-D		1320		1	X	
SP-1-E		1325		1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: NATHAN SOLOMON	Printed Name: Sydni Acevedo	Printed Name:	Printed Name:
	Company: GEI	Company: ARI	Company:	Company:
	Date & Time: 8.29.24 11:28	Date & Time: 8/29/24 1128	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1-A	24I0008-01	Solid	28-Aug-2024 13:05	29-Aug-2024 11:28
SP-1-B	24I0008-02	Solid	28-Aug-2024 13:10	29-Aug-2024 11:28
SP-1-C	24I0008-03	Solid	28-Aug-2024 13:15	29-Aug-2024 11:28
SP-1-D	24I0008-04	Solid	28-Aug-2024 13:20	29-Aug-2024 11:28
SP-1-E	24I0008-05	Solid	28-Aug-2024 13:25	29-Aug-2024 11:28

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Work Order Case Narrative

Client: GeoEngineers
Project: POE Marine Terminal SW Improvements
Work Order: 24I0008

Sample receipt

Samples as listed on the preceding page were received 29-Aug-2024 11:28 under ARI work order 24I0008. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Insufficient volume was received for matrix QC.

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Semivolatiles - EPA Method SW8270E

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements, with accepted excursions low of limits outside the 20% window. Associated positive results have been "Q"-flagged.

Internal standard areas were within limits except for low response for d12-peryleine low in SP-1-B and SP-1-E, attributed to matrix effect. Both sample extracts were rerun at a 1:5 dilution and both sets of data reported here.
The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent differences (RPD) outside of control limits are flagged on the summary sheet.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent differences (RPD) outside of advisory control limits are flagged on the summary sheet.

PAH - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times. Sample extracts were run at dilutions due to color and characteristics of the matrix.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent differences (RPD) outside of advisory control limits are flagged on the summary sheet.

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements, with accepted outliers. Aroclor 1260 response was low on the ZB5 column in SMI0185-ICV2. Decachlorobiphenyl (DCBP) response was low on the ZB35 column in SMI0185-CCV1 and SMI0185-CCV5.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Internal standard areas were within limits except for hexabromobiphenyl outside limits on the ZB35 column in SMI0185-CCV5.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent differences (RPD) were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent differences (RPD) were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits

Total Metals - EPA Method 6020B

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations including interference checks were within method requirements for reported elements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

The matrix spike (MS) percent recoveries outside of advisory control limits are flagged on the summary sheet/

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Total Mercury - EPA Method 7471B

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Batch QC was run on a non-project sample. The matrix spike (MS) recovery was high of limits at 127%. The matrix spike duplicate (MSD) recovery at 124% was within control limits. The duplicate (DUP) relative percent difference (RPD) was outside advisory control limits at 23.3%. The post spike had an acceptable recovery at 97.1%..

Dioxin/Furans - EPA Method 1613

The sample(s) were extracted and analyzed within the recommended holding times. Analysis was performed using an application specific column developed by Restek. The RTX-DIoxin2 column has unique isomer separation for the 2378-TCDF, eliminating the need for confirmation analysis.

Initial and continuing calibrations were within method requirements.

Labeled internal standard areas were within limit, with accepted outliers in calibration runs. 13C12-123479-HpCDF response was low of limits in SMI0280-CCV1, SMI0280-CCV2, and SMI0280-CCV3. 13C12-1236787-HxCDD response was high in SMI0280-CCV1.
The cleanup surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits, with low-level response in the Total TCDD range (non-target). Associated positive results have been "B"-flagged.

The OPR (Ongoing Precision and Recovery) standard (LCS) was run in duplicate with percent recoveries and relative percent differences (RPD) within advisory control limits.

The reference material (SRM) percent recoveries were within control limits.

The duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Revised 09/27/2024 to correct target list.

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: GeoEngineers
Project Name: Poe Marine Terminal
COC No(s): _____ (NA)
Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____
Assigned ARI Job No: 24I0008
Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1128 — 5.8

If cooler temperature is out of compliance fill out form 00070F — Temp Gun ID#: 9708

Cooler Accepted by: SA Date: 8/29/24 Time: 1128

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?			YES	(NO)
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?		NA	(YES)	NO
How were bottles sealed in plastic bags?		Individually	Grouped	(Not)
Did all bottles arrive in good condition (unbroken)?			(YES)	NO
Were all bottle labels complete and legible?			(YES)	NO
Did the number of containers listed on COC match with the number of containers received?			(YES)	NO
Did all bottle labels and tags agree with custody papers?			(YES)	NO
Were all bottles used correct for the requested analyses?			(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)		NA	YES	(NO)
Were all VOC vials free of air bubbles?		(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?			(YES)	NO
Date VOC Trip Blank was made at ARI		(NA)		

Were the sample(s) split by ARI? (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: SA Date: ~~9/01/24~~ 9/02/24 SA Time: 1039 Labels checked by: SA

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:05
Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 14:22

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24I0008-01 A
Preparation Batch: BMI0045 — Sample Size: 4.87 g (wet) — Dry Weight:4.45 g
Prepared: 09/03/2024 — Final Volume: 5 mL — % Solids: 91.35

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.56	1.12	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.56	1.12	ND	ug/kg	U
Bromomethane	74-83-9	1	2.25	2.25	ND	ug/kg	U
Chloroethane	75-00-3	1	2.25	2.25	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.12	2.25	ND	ug/kg	U
Acrolein	107-02-8	1	2.81	5.62	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.12	2.25	ND	ug/kg	U
Acetone	67-64-1	1	11.2	11.2	75.8	ug/kg	
1,1-Dichloroethene	75-35-4	1	0.56	1.12	ND	ug/kg	U
Iodomethane	74-88-4	1	1.12	1.12	ND	ug/kg	U
Methylene Chloride	75-09-2	1	5.62	5.62	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.62	5.62	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.12	1.12	2.20	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.12	1.12	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.62	5.62	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.56	1.12	ND	ug/kg	U
2-Butanone	78-93-3	1	2.81	5.62	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.56	1.12	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.56	1.12	ND	ug/kg	U
Chloroform	67-66-3	1	0.56	1.12	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.56	1.12	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.12	1.12	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.56	1.12	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.56	1.12	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.56	1.12	ND	ug/kg	U
Benzene	71-43-2	1	0.56	1.12	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.56	1.12	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.56	1.12	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.56	1.12	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.56	1.12	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.62	5.62	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.81	5.62	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:05

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 14:22

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
cis-1,3-Dichloropropene	10061-01-5	1	0.56	1.12	ND	ug/kg	U
Toluene	108-88-3	1	0.56	1.12	0.56	ug/kg	J
trans-1,3-Dichloropropene	10061-02-6	1	0.56	1.12	ND	ug/kg	U
2-Hexanone	591-78-6	1	2.81	5.62	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.56	1.12	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.56	1.12	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.56	1.12	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.56	1.12	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.56	1.12	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.56	1.12	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.56	1.12	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.56	1.12	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.12	2.25	ND	ug/kg	U
o-Xylene	95-47-6	1	0.56	1.12	1.05	ug/kg	J
Xylenes, total	1330-20-7	1	1.12	2.25	1.98	ug/kg	J
Styrene	100-42-5	1	0.56	1.12	ND	ug/kg	U
Bromoform	75-25-2	1	0.56	1.12	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.56	1.12	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.25	2.25	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.62	5.62	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.56	1.12	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.56	1.12	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.56	1.12	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.56	1.12	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.56	1.12	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.56	1.12	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.56	1.12	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.56	1.12	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.56	1.12	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.56	1.12	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.56	1.12	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.56	1.12	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.56	1.12	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.12	1.12	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.81	5.62	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.81	5.62	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.62	5.62	ND	ug/kg	U
Naphthalene	91-20-3	1	2.81	5.62	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:05

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 14:22

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,2,3-Trichlorobenzene	87-61-6	1	2.81	5.62	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.56	1.12	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.56	1.12	ND	ug/kg	U
2-Pentanone	107-87-9	1	2.81	5.62	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*117*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*99.8*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*105*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 08/28/2024 13:05

Instrument: NT3 Analyst: LN — Analyzed: 09/04/2024 12:56

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24I0008-01 C

Preparation Batch: BMI0068 — Sample Size: 5.026 g (wet) — Dry Weight:4.59 g

Prepared: 09/04/2024 — Final Volume: 5 mL — % Solids: 91.35

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	5920	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*95.8*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*96.5*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:05

Instrument: NT10 Analyst: RJL — Analyzed: 09/16/2024 22:33

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-01 E 02
	Preparation Batch: BMI0092	Sample Size: 10.96 g (wet)	Dry Weight:10.01 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 91.35
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-01 E 02
	Cleanup Batch: CMI0119	Initial Volume: 1000 uL	
	Cleaned: 11-Sep-2024	Final Volume: 1000 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	10.0	20.0	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	35.0	49.9	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	20.0	20.0	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	10.0	20.0	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	10.0	20.0	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	10.0	20.0	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	20.0	20.0	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	10.0	20.0	ND	ug/kg	U
2-Methylphenol	95-48-7	1	10.0	20.0	ND	ug/kg	U
Hexachloroethane	67-72-1	1	10.0	20.0	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	15.0	20.0	ND	ug/kg	U
4-Methylphenol	106-44-5	1	15.0	20.0	ND	ug/kg	U
Nitrobenzene	98-95-3	1	10.0	20.0	ND	ug/kg	U
Isophorone	78-59-1	1	15.0	20.0	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	10.0	20.0	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	49.9	99.9	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	10.0	20.0	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	49.9	99.9	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	10.0	20.0	ND	ug/kg	U
Naphthalene	91-20-3	1	10.0	20.0	93.1	ug/kg	
Benzoic acid	65-85-0	1	99.9	200	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	49.9	99.9	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	10.0	20.0	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	49.9	99.9	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	10.0	20.0	75.1	ug/kg	
Hexachlorocyclopentadiene	77-47-4	1	49.9	99.9	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	49.9	99.9	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	49.9	99.9	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	10.0	20.0	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	49.9	99.9	ND	ug/kg	U
Acenaphthylene	208-96-8	1	10.0	20.0	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	10.0	20.0	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:05

Instrument: NT10 Analyst: RJL — Analyzed: 09/16/2024 22:33

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	49.9	99.9	ND	ug/kg	U
Acenaphthene	83-32-9	1	10.0	20.0	92.7	ug/kg	
3-Nitroaniline	99-09-2	1	49.9	99.9	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	99.9	200	ND	ug/kg	U
Dibenzofuran	132-64-9	1	20.0	20.0	64.5	ug/kg	
4-Nitrophenol	100-02-7	1	49.9	99.9	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	49.9	99.9	ND	ug/kg	U
Fluorene	86-73-7	1	20.0	20.0	72.4	ug/kg	
4-Chlorophenylphenyl ether	7005-72-3	1	35.0	49.9	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	35.0	49.9	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	49.9	99.9	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	99.9	200	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	10.0	20.0	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	20.0	20.0	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	20.0	20.0	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	49.9	99.9	ND	ug/kg	U
Phenanthrene	85-01-8	1	10.0	20.0	200	ug/kg	
Anthracene	120-12-7	1	10.0	20.0	29.1	ug/kg	
Carbazole	86-74-8	1	10.0	20.0	14.1	ug/kg	J
Di-n-Butylphthalate	84-74-2	1	10.0	20.0	ND	ug/kg	U
Fluoranthene	206-44-0	1	10.0	20.0	189	ug/kg	
Pyrene	129-00-0	1	10.0	20.0	204	ug/kg	
Butylbenzylphthalate	85-68-7	1	10.0	20.0	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	10.0	20.0	43.4	ug/kg	
3,3'-Dichlorobenzidine	91-94-1	1	49.9	99.9	ND	ug/kg	U
Chrysene	218-01-9	1	10.0	20.0	71.6	ug/kg	
bis(2-Ethylhexyl)phthalate	117-81-7	1	40.0	49.9	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	10.0	20.0	ND	ug/kg	U
Benzofluoranthenes, Total		1	30.0	40.0	71.8	ug/kg	
Benzo(a)pyrene	50-32-8	1	10.0	20.0	31.2	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	20.0	20.0	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	20.0	20.0	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	20.0	20.0	ND	ug/kg	U
Pyridine	110-86-1	1	99.9	99.9	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	10.0	20.0	37.9	ug/kg	
Surrogate: 2-Fluorophenol				*27-120 %*	*55.7*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*58.6*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:05

Instrument: NT10 Analyst: RJL — Analyzed: 09/16/2024 22:33

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Chlorophenol-d4		*31-120 %*	*65.2*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*32-120 %*	*63.2*	*%*	
Surrogate: Nitrobenzene-d5		*30-120 %*	*69.0*	*%*	
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*68.4*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*76.9*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*79.8*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 08/28/2024 13:05
Instrument: NT17 Analyst: JZ — Analyzed: 09/11/2024 20:51

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-01 E 03
	Preparation Batch: BMI0093	Sample Size: 10.95 g (wet)	Dry Weight:10.00 g
	Prepared: 09/05/2024	Final Volume: 0.5 mL	% Solids: 91.35
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-01 E 03
	Cleanup Batch: CMI0064	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-01 E 03
	Cleanup Batch: CMI0063	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	3	7.50	15.0	120	ug/kg	D
2-Methylnaphthalene	91-57-6	3	7.50	15.0	102	ug/kg	D
1-Methylnaphthalene	90-12-0	3	7.50	15.0	46.9	ug/kg	D
Acenaphthylene	208-96-8	3	7.50	15.0	ND	ug/kg	U
Acenaphthene	83-32-9	3	7.50	15.0	133	ug/kg	D
Dibenzofuran	132-64-9	3	7.50	15.0	67.5	ug/kg	D
Fluorene	86-73-7	3	7.50	15.0	80.3	ug/kg	D
Phenanthrene	85-01-8	3	7.50	15.0	260	ug/kg	D
Anthracene	120-12-7	3	7.50	15.0	53.4	ug/kg	D
Fluoranthene	206-44-0	3	7.50	15.0	219	ug/kg	D
Pyrene	129-00-0	3	7.50	15.0	221	ug/kg	D
Benzo(a)anthracene	56-55-3	3	7.50	15.0	42.7	ug/kg	D
Chrysene	218-01-9	3	7.50	15.0	74.7	ug/kg	D
Benzo(b)fluoranthene	205-99-2	3	7.50	15.0	33.1	ug/kg	D
Benzo(k)fluoranthene	207-08-9	3	7.50	15.0	13.3	ug/kg	J, D
Benzo(j)fluoranthene	205-82-3	3	7.50	15.0	12.8	ug/kg	J, D
Benzofluoranthenes, Total		3	22.5	45.0	59.0	ug/kg	D
Benzo(a)pyrene	50-32-8	3	7.50	15.0	27.2	ug/kg	D
Indeno(1,2,3-cd)pyrene	193-39-5	3	7.50	15.0	10.1	ug/kg	J, D
Dibenzo(a,h)anthracene	53-70-3	3	7.50	15.0	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	3	7.50	15.0	22.7	ug/kg	D
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*75.4*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*61.8*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*89.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 08/28/2024 13:05
Instrument: FID4 Analyst: NRB — Analyzed: 09/10/2024 12:51

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-01 E 04
	Preparation Batch: BMI0094	Sample Size: 10 g (wet)	Dry Weight:9.13 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 91.35
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-01 E 04
	Cleanup Batch: CMI0054	Initial Volume: 1 uL	
	Cleaned: 09-Sep-2024	Final Volume: 1 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-01 E 04
	Cleanup Batch: CMI0055	Initial Volume: 5 uL	
	Cleaned: 09-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.47	53.4	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	10.9	264	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*92.7*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 08/28/2024 13:05
Instrument: ECD5 Analyst: AA — Analyzed: 09/10/2024 20:21

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-01 E 01
	Preparation Batch: BMI0088	Sample Size: 5.48 g (wet)	Dry Weight:5.01 g
	Prepared: 09/05/2024	Final Volume: 5 mL	% Solids: 91.35
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-01 E 01
	Cleanup Batch: CMI0048	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-01 E 01
	Cleanup Batch: CMI0046	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24I0008-01 E 01
	Cleanup Batch: CMI0047	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	10.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	10.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	10.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	10.0	20.0	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	10.0	20.0	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	10.0	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*83.8*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*92.0*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*79.8*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*91.4*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:05
Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 10:12

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24I0008-01 G 01
	Preparation Batch: BMH0140	Sample Size: 10.96 g (wet)	Dry Weight:10.03 g
	Prepared: 09/03/2024	Final Volume: 20 uL	% Solids: 91.50
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-01 G 01
	Cleanup Batch: CMI0057	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-01 G 01
	Cleanup Batch: CMI0056	Initial Volume: 20 uL	
	Cleaned: 05-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24I0008-01 G 01
	Cleanup Batch: CMI0058	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF			0.655-0.886	0.529	0.997	ND	ng/kg	U
2,3,7,8-TCDD			0.655-0.886	0.403	0.997	ND	ng/kg	U
1,2,3,7,8-PeCDF			1.318-1.783	0.583	0.997	ND	ng/kg	U
2,3,4,7,8-PeCDF			1.318-1.783	0.620	0.997	ND	ng/kg	U
1,2,3,7,8-PeCDD			1.318-1.783	0.874	0.997	ND	ng/kg	U
1,2,3,4,7,8-HxCDF			1.054-1.426	0.621	0.997	ND	ng/kg	U
1,2,3,6,7,8-HxCDF			1.054-1.426	0.648	0.997	ND	ng/kg	U
2,3,4,6,7,8-HxCDF		0.638	1.054-1.426		0.997	**0.662**	ng/kg	EMPC, J
1,2,3,7,8,9-HxCDF			1.054-1.426	1.17	0.997	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	1.14	0.997	ND	ng/kg	U
1,2,3,6,7,8-HxCDD			1.054-1.426	1.20	0.997	ND	ng/kg	U
1,2,3,7,8,9-HxCDD			1.054-1.426	1.27	0.997	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDF		1.197	0.893-1.208		0.997	**5.19**	ng/kg	
1,2,3,4,7,8,9-HpCDF			0.893-1.208	2.56	0.997	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDD		1.143	0.893-1.208		2.49	**26.0**	ng/kg	
OCDF			0.757-1.024	3.64	2.49	ND	ng/kg	U
OCDD		0.857	0.757-1.024		9.97	**220**	ng/kg	
Homologue groups								
Total TCDF					0.997	ND	ng/kg	U
Total TCDD					0.997	**2.54**	ng/kg	B
Total PeCDF					0.997	**3.40**	ng/kg	
Total PeCDD					0.997	**2.47**	ng/kg	
Total HxCDF					0.997	ND	ng/kg	U
Total HxCDD					0.997	**6.66**	ng/kg	
Total HpCDF					0.997	**17.2**	ng/kg	
Total HpCDD					0.997	**119**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:05

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 10:12

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					1.50		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					0.38		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					1.46		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					0.38		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:05

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 10:12

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.781*	*0.655-0.886*	*24-169 %*	*64.6*	*%*	
13C12-2,3,7,8-TCDD		*0.820*	*0.655-0.886*	*25-164 %*	*75.0*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.454*	*1.318-1.783*	*24-185 %*	*64.4*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.478*	*1.318-1.783*	*21-178 %*	*58.8*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.497*	*1.318-1.783*	*25-181 %*	*65.2*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.516*	*0.434-0.587*	*26-152 %*	*96.1*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.527*	*0.434-0.587*	*26-123 %*	*84.7*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.534*	*0.434-0.587*	*28-136 %*	*82.1*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.531*	*0.434-0.587*	*29-147 %*	*68.9*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.245*	*1.054-1.426*	*32-141 %*	*83.3*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.206*	*1.054-1.426*	*28-130 %*	*74.9*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.451*	*0.374-0.506*	*28-143 %*	*54.2*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.391*	*0.374-0.506*	*26-138 %*	*41.7*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.090*	*0.893-1.208*	*23-140 %*	*54.5*	*%*	
13C12-OCDD		*0.902*	*0.757-1.024*	*17-157 %*	*33.5*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*83.8*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:05

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 10:12

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-A

24I0008-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 08/28/2024 13:05

Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:29

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-01 F 01

Preparation Batch: BMI0146 — Sample Size: 1.033 g (wet) — Dry Weight:0.96 g

Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 92.70

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.21	6.23	mg/kg	
Cadmium	7440-43-9	20	0.03	0.10	0.11	mg/kg	
Copper	7440-50-8	20	0.18	0.52	23.8	mg/kg	
Nickel	7440-02-0	20	0.08	0.52	30.4	mg/kg	
Selenium	7782-49-2	20	0.19	0.52	0.45	mg/kg	J
Zinc	7440-66-6	20	3.0	6.3	50.7	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 08/28/2024 13:05
Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:29

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-01 F 01
Preparation Batch: BMI0146 — Sample Size: 1.033 g (wet) — Dry Weight:0.96 g
Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 92.70

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.11	0.21	ND	mg/kg	U
Barium	7440-39-3	20	0.12	0.52	34.8	mg/kg	
Beryllium	7440-41-7	20	0.02	0.21	0.17	mg/kg	J
Chromium	7440-47-3	100	1.36	2.61	18.2	mg/kg	D
Lead	7439-92-1	20	0.05	0.10	5.51	mg/kg	
Silver	7440-22-4	20	0.02	0.21	0.05	mg/kg	J
Thallium	7440-28-0	20	0.03	0.21	0.04	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 08/28/2024 13:05
Instrument: HYDRA Analyst: ml — Analyzed: 09/09/2024 13:03

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24I0008-01 F
Preparation Batch: BMI0056 — Sample Size: 0.235 g (wet) — Dry Weight:0.22 g
Prepared: 09/04/2024 — Final Volume: 50 mL — % Solids: 92.70

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00482	0.0230	0.0263	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-A

24I0008-01 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 08/28/2024 13:05
Instrument: N/A Analyst: TW — Analyzed: 09/03/2024 05:00

Sample Preparation: Preparation Method: No Prep-Organics; Preparation Batch: BMI0018; Prepared: 09/02/2024; Sample Size: 1 g (wet); Final Volume: 1 g — Extract ID: 24I0008-01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**91.50**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:10

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 14:48

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24I0008-02 A

Preparation Batch: BMI0045 — Sample Size: 5.18 g (wet) — Dry Weight:4.34 g

Prepared: 09/03/2024 — Final Volume: 5 mL — % Solids: 83.71

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.58	1.15	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.58	1.15	ND	ug/kg	U
Bromomethane	74-83-9	1	2.31	2.31	ND	ug/kg	U
Chloroethane	75-00-3	1	2.31	2.31	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.15	2.31	ND	ug/kg	U
Acrolein	107-02-8	1	2.88	5.77	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.15	2.31	ND	ug/kg	U
Acetone	67-64-1	1	11.5	11.5	88.2	ug/kg	
1,1-Dichloroethene	75-35-4	1	0.58	1.15	ND	ug/kg	U
Iodomethane	74-88-4	1	1.15	1.15	ND	ug/kg	U
Methylene Chloride	75-09-2	1	5.77	5.77	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.77	5.77	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.15	1.15	2.43	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.15	1.15	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.77	5.77	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.58	1.15	ND	ug/kg	U
2-Butanone	78-93-3	1	2.88	5.77	4.68	ug/kg	J
2,2-Dichloropropane	594-20-7	1	0.58	1.15	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.58	1.15	ND	ug/kg	U
Chloroform	67-66-3	1	0.58	1.15	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.58	1.15	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.15	1.15	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.58	1.15	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.58	1.15	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.58	1.15	ND	ug/kg	U
Benzene	71-43-2	1	0.58	1.15	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.58	1.15	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.58	1.15	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.58	1.15	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.58	1.15	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.77	5.77	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.88	5.77	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.58	1.15	ND	ug/kg	U
Toluene	108-88-3	1	0.58	1.15	0.66	ug/kg	J
trans-1,3-Dichloropropene	10061-02-6	1	0.58	1.15	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:10

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 14:48

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.88	5.77	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.58	1.15	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.58	1.15	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.58	1.15	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.58	1.15	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.58	1.15	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.58	1.15	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.58	1.15	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.58	1.15	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.15	2.31	ND	ug/kg	U
o-Xylene	95-47-6	1	0.58	1.15	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.15	2.31	ND	ug/kg	U
Styrene	100-42-5	1	0.58	1.15	ND	ug/kg	U
Bromoform	75-25-2	1	0.58	1.15	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.58	1.15	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.31	2.31	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.77	5.77	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.58	1.15	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.58	1.15	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.58	1.15	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.58	1.15	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.58	1.15	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.58	1.15	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.58	1.15	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.58	1.15	0.78	ug/kg	J
s-Butylbenzene	135-98-8	1	0.58	1.15	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.58	1.15	1.21	ug/kg	
1,3-Dichlorobenzene	541-73-1	1	0.58	1.15	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.58	1.15	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.58	1.15	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.15	1.15	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.88	5.77	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.88	5.77	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.77	5.77	ND	ug/kg	U
Naphthalene	91-20-3	1	2.88	5.77	227	ug/kg	
1,2,3-Trichlorobenzene	87-61-6	1	2.88	5.77	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.58	1.15	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.58	1.15	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:10

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 14:48

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.88	5.77	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*120*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*101*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*103*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 08/28/2024 13:10

Instrument: NT3 Analyst: LN — Analyzed: 09/04/2024 13:18

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24I0008-02 C

Preparation Batch: BMI0068 — Sample Size: 4.805 g (wet) — Dry Weight:4.02 g

Prepared: 09/04/2024 — Final Volume: 5 mL — % Solids: 83.71

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	7190	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*96.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*97.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:10

Instrument: NT10 Analyst: RJL — Analyzed: 09/16/2024 23:13

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-02 E 02
	Preparation Batch: BMI0092	Sample Size: 11.98 g (wet)	Dry Weight:10.03 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 83.71
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-02 E 02
	Cleanup Batch: CMI0119	Initial Volume: 1000 uL	
	Cleaned: 11-Sep-2024	Final Volume: 1000 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	10.0	19.9	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	34.9	49.9	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	19.9	19.9	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	10.0	19.9	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	10.0	19.9	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	10.0	19.9	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	19.9	19.9	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	10.0	19.9	ND	ug/kg	U
2-Methylphenol	95-48-7	1	10.0	19.9	ND	ug/kg	U
Hexachloroethane	67-72-1	1	10.0	19.9	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	15.0	19.9	ND	ug/kg	U
4-Methylphenol	106-44-5	1	15.0	19.9	ND	ug/kg	U
Nitrobenzene	98-95-3	1	10.0	19.9	ND	ug/kg	U
Isophorone	78-59-1	1	15.0	19.9	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	10.0	19.9	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	49.9	99.7	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	10.0	19.9	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	49.9	99.7	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	10.0	19.9	ND	ug/kg	U
Naphthalene	91-20-3	1	10.0	19.9	64.8	ug/kg	
Benzoic acid	65-85-0	1	99.7	199	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	49.9	99.7	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	10.0	19.9	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	49.9	99.7	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	10.0	19.9	67.5	ug/kg	
Hexachlorocyclopentadiene	77-47-4	1	49.9	99.7	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	49.9	99.7	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	49.9	99.7	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	10.0	19.9	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	49.9	99.7	ND	ug/kg	U
Acenaphthylene	208-96-8	1	10.0	19.9	10.5	ug/kg	J
Dimethylphthalate	131-11-3	1	10.0	19.9	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:10

Instrument: NT10 Analyst: RJL — Analyzed: 09/16/2024 23:13

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	49.9	99.7	ND	ug/kg	U
Acenaphthene	83-32-9	1	10.0	19.9	289	ug/kg	
3-Nitroaniline	99-09-2	1	49.9	99.7	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	99.7	199	ND	ug/kg	U
Dibenzofuran	132-64-9	1	19.9	19.9	157	ug/kg	
4-Nitrophenol	100-02-7	1	49.9	99.7	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	49.9	99.7	ND	ug/kg	U
Fluorene	86-73-7	1	19.9	19.9	225	ug/kg	
4-Chlorophenylphenyl ether	7005-72-3	1	34.9	49.9	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	34.9	49.9	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	49.9	99.7	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	99.7	199	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	10.0	19.9	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	19.9	19.9	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	19.9	19.9	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	49.9	99.7	ND	ug/kg	U
Phenanthrene	85-01-8	1	10.0	19.9	415	ug/kg	
Anthracene	120-12-7	1	10.0	19.9	92.2	ug/kg	
Carbazole	86-74-8	1	10.0	19.9	37.5	ug/kg	
Di-n-Butylphthalate	84-74-2	1	10.0	19.9	ND	ug/kg	U
Fluoranthene	206-44-0	1	10.0	19.9	478	ug/kg	
Pyrene	129-00-0	1	10.0	19.9	330	ug/kg	
Butylbenzylphthalate	85-68-7	1	10.0	19.9	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	10.0	19.9	73.7	ug/kg	
3,3'-Dichlorobenzidine	91-94-1	1	49.9	99.7	ND	ug/kg	U
Chrysene	218-01-9	1	10.0	19.9	85.7	ug/kg	
bis(2-Ethylhexyl)phthalate	117-81-7	1	39.9	49.9	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	10.0	19.9	ND	ug/kg	U
Benzofluoranthenes, Total		1	29.9	39.9	119	ug/kg	
Benzo(a)pyrene	50-32-8	1	10.0	19.9	48.1	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	19.9	19.9	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	19.9	19.9	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	19.9	19.9	ND	ug/kg	U
Pyridine	110-86-1	1	99.7	99.7	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	10.0	19.9	46.6	ug/kg	
Surrogate: 2-Fluorophenol				*27-120 %*	*63.7*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*63.4*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:10

Instrument: NT10 Analyst: RJL — Analyzed: 09/16/2024 23:13

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Chlorophenol-d4		*31-120 %*	*72.0*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*32-120 %*	*67.5*	*%*	
Surrogate: Nitrobenzene-d5		*30-120 %*	*72.7*	*%*	
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*72.7*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*93.0*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*107*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 08/28/2024 13:10
Instrument: NT17 Analyst: JZ — Analyzed: 09/11/2024 21:22

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-02 E 03
	Preparation Batch: BMI0093	Sample Size: 11.96 g (wet)	Dry Weight:10.01 g
	Prepared: 09/05/2024	Final Volume: 0.5 mL	% Solids: 83.71
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-02 E 03
	Cleanup Batch: CMI0064	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-02 E 03
	Cleanup Batch: CMI0063	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	3	7.49	15.0	60.2	ug/kg	D
2-Methylnaphthalene	91-57-6	3	7.49	15.0	62.7	ug/kg	D
1-Methylnaphthalene	90-12-0	3	7.49	15.0	41.1	ug/kg	D
Acenaphthylene	208-96-8	3	7.49	15.0	11.0	ug/kg	J, D
Acenaphthene	83-32-9	3	7.49	15.0	313	ug/kg	D
Dibenzofuran	132-64-9	3	7.49	15.0	136	ug/kg	D
Fluorene	86-73-7	3	7.49	15.0	207	ug/kg	D
Phenanthrene	85-01-8	3	7.49	15.0	380	ug/kg	D
Anthracene	120-12-7	3	7.49	15.0	84.7	ug/kg	D
Fluoranthene	206-44-0	3	7.49	15.0	460	ug/kg	D
Pyrene	129-00-0	3	7.49	15.0	329	ug/kg	D
Benzo(a)anthracene	56-55-3	3	7.49	15.0	124	ug/kg	D
Chrysene	218-01-9	3	7.49	15.0	145	ug/kg	D
Benzo(b)fluoranthene	205-99-2	3	7.49	15.0	99.1	ug/kg	D
Benzo(k)fluoranthene	207-08-9	3	7.49	15.0	48.6	ug/kg	D
Benzo(j)fluoranthene	205-82-3	3	7.49	15.0	47.6	ug/kg	D
Benzofluoranthenes, Total		3	22.5	44.9	194	ug/kg	D
Benzo(a)pyrene	50-32-8	3	7.49	15.0	96.0	ug/kg	D
Indeno(1,2,3-cd)pyrene	193-39-5	3	7.49	15.0	49.8	ug/kg	D
Dibenzo(a,h)anthracene	53-70-3	3	7.49	15.0	11.9	ug/kg	J, D
Benzo(g,h,i)perylene	191-24-2	3	7.49	15.0	52.8	ug/kg	D
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*84.4*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*73.9*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*102*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 08/28/2024 13:10
Instrument: FID4 Analyst: NRB — Analyzed: 09/10/2024 13:12

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-02 E 04
	Preparation Batch: BMI0094	Sample Size: 10 g (wet)	Dry Weight:8.37 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 83.71
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-02 E 04
	Cleanup Batch: CMI0054	Initial Volume: 1 uL	
	Cleaned: 09-Sep-2024	Final Volume: 1 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-02 E 04
	Cleanup Batch: CMI0055	Initial Volume: 5 uL	
	Cleaned: 09-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.97	64.4	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.9	372	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*94.0*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 08/28/2024 13:10
Instrument: ECD5 Analyst: AA — Analyzed: 09/10/2024 20:41

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-02 E 01
	Preparation Batch: BMI0088	Sample Size: 5.98 g (wet)	Dry Weight:5.01 g
	Prepared: 09/05/2024	Final Volume: 5 mL	% Solids: 83.71
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-02 E 01
	Cleanup Batch: CMI0048	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-02 E 01
	Cleanup Batch: CMI0046	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24I0008-02 E 01
	Cleanup Batch: CMI0047	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	10.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	10.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	10.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	10.0	20.0	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	10.0	20.0	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	10.0	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*80.3*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*84.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*75.3*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*83.5*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:10
Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 11:01

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24I0008-02 G 01
	Preparation Batch: BMH0140	Sample Size: 13.48 g (wet)	Dry Weight:10.02 g
	Prepared: 09/03/2024	Final Volume: 20 uL	% Solids: 74.32
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-02 G 01
	Cleanup Batch: CMI0057	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-02 G 01
	Cleanup Batch: CMI0056	Initial Volume: 20 uL	
	Cleaned: 05-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24I0008-02 G 01
	Cleanup Batch: CMI0058	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.773	0.655-0.886		0.998	**1.08**	ng/kg	
2,3,7,8-TCDD			0.655-0.886	0.390	0.998	ND	ng/kg	U
1,2,3,7,8-PeCDF			1.318-1.783	0.586	0.998	ND	ng/kg	U
2,3,4,7,8-PeCDF		1.190	1.318-1.783		0.998	**0.512**	ng/kg	EMPC, J
1,2,3,7,8-PeCDD			1.318-1.783	0.997	0.998	ND	ng/kg	U
1,2,3,4,7,8-HxCDF		1.620	1.054-1.426		0.998	**1.09**	ng/kg	EMPC
1,2,3,6,7,8-HxCDF			1.054-1.426	0.672	0.998	ND	ng/kg	U
2,3,4,6,7,8-HxCDF			1.054-1.426	0.742	0.998	ND	ng/kg	U
1,2,3,7,8,9-HxCDF			1.054-1.426	0.991	0.998	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	1.09	0.998	ND	ng/kg	U
1,2,3,6,7,8-HxCDD		1.523	1.054-1.426		0.998	**3.57**	ng/kg	EMPC
1,2,3,7,8,9-HxCDD			1.054-1.426	1.20	0.998	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDF		1.003	0.893-1.208		0.998	**19.1**	ng/kg	
1,2,3,4,7,8,9-HpCDF			0.893-1.208	1.72	0.998	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDD		1.012	0.893-1.208		2.50	**143**	ng/kg	
OCDF		0.872	0.757-1.024		2.50	**54.4**	ng/kg	
OCDD		0.905	0.757-1.024		9.98	**1260**	ng/kg	
Homologue groups								
Total TCDF					0.998	**6.00**	ng/kg	
Total TCDD					0.998	**19.7**	ng/kg	B
Total PeCDF					0.998	**8.82**	ng/kg	
Total PeCDD					0.998	**11.7**	ng/kg	
Total HxCDF					0.998	**36.8**	ng/kg	
Total HxCDD					0.998	**54.8**	ng/kg	
Total HpCDF					0.998	**75.4**	ng/kg	
Total HpCDD					0.998	**780**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:10

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 11:01

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					3.63		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					2.59		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					3.30		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					2.12		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:10

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 11:01

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.764*	*0.655-0.886*	*24-169 %*	*68.7*	*%*	
13C12-2,3,7,8-TCDD		*0.810*	*0.655-0.886*	*25-164 %*	*79.2*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.528*	*1.318-1.783*	*24-185 %*	*72.6*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.561*	*1.318-1.783*	*21-178 %*	*69.3*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.596*	*1.318-1.783*	*25-181 %*	*73.4*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.520*	*0.434-0.587*	*26-152 %*	*101*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.505*	*0.434-0.587*	*26-123 %*	*85.8*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.531*	*0.434-0.587*	*28-136 %*	*91.1*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.560*	*0.434-0.587*	*29-147 %*	*87.2*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.264*	*1.054-1.426*	*32-141 %*	*94.3*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.177*	*1.054-1.426*	*28-130 %*	*86.3*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.453*	*0.374-0.506*	*28-143 %*	*76.9*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.434*	*0.374-0.506*	*26-138 %*	*64.2*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.054*	*0.893-1.208*	*23-140 %*	*82.1*	*%*	
13C12-OCDD		*0.921*	*0.757-1.024*	*17-157 %*	*61.0*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*77.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:10

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 11:01

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-B

24I0008-02 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 08/28/2024 13:10

Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:09

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-02 F 01

Preparation Batch: BMI0146 — Sample Size: 1.027 g (wet) — Dry Weight:0.78 g

Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 75.77

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.05	0.26	6.05	mg/kg	
Cadmium	7440-43-9	20	0.04	0.13	0.07	mg/kg	J
Copper	7440-50-8	20	0.22	0.64	25.5	mg/kg	
Nickel	7440-02-0	20	0.10	0.64	31.0	mg/kg	
Selenium	7782-49-2	20	0.23	0.64	0.41	mg/kg	J
Zinc	7440-66-6	20	3.8	7.7	50.5	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 08/28/2024 13:10
Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:09

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-02 F 01
Preparation Batch: BMI0146 — Sample Size: 1.027 g (wet) — Dry Weight:0.78 g
Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 75.77

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.13	0.26	ND	mg/kg	U
Barium	7440-39-3	20	0.15	0.64	35.8	mg/kg	
Beryllium	7440-41-7	20	0.02	0.26	0.20	mg/kg	J
Chromium	7440-47-3	100	1.67	3.21	24.0	mg/kg	D
Lead	7439-92-1	20	0.07	0.13	5.87	mg/kg	
Silver	7440-22-4	20	0.03	0.26	0.06	mg/kg	J
Thallium	7440-28-0	20	0.03	0.26	0.05	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 08/28/2024 13:10
Instrument: HYDRA Analyst: ml — Analyzed: 09/09/2024 13:05

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24I0008-02 F
Preparation Batch: BMI0056 — Sample Size: 0.231 g (wet) — Dry Weight:0.18 g
Prepared: 09/04/2024 — Final Volume: 50 mL — % Solids: 75.77

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00600	0.0286	0.0327	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 08/28/2024 13:10
Instrument: N/A Analyst: TW — Analyzed: 09/03/2024 05:00

Sample Preparation: Preparation Method: No Prep-Organics; Preparation Batch: BMI0018; Prepared: 09/02/2024; Sample Size: 1 g (wet); Final Volume: 1 g — Extract ID: 24I0008-02

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**74.32**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02RE1 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:10
Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 16:00

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-02RE1 E 02
	Preparation Batch: BMI0092	Sample Size: 11.98 g (wet)	Dry Weight:10.03 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 83.71
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-02RE1 E 02
	Cleanup Batch: CMI0119	Initial Volume: 1000 uL	
	Cleaned: 11-Sep-2024	Final Volume: 1000 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	5	49.9	99.7	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	5	175	249	ND	ug/kg	U
2-Chlorophenol	95-57-8	5	99.7	99.7	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	5	49.9	99.7	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	5	49.9	99.7	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	5	49.9	99.7	ND	ug/kg	U
Benzyl Alcohol	100-51-6	5	99.7	99.7	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	5	49.9	99.7	ND	ug/kg	U
2-Methylphenol	95-48-7	5	49.9	99.7	ND	ug/kg	U
Hexachloroethane	67-72-1	5	49.9	99.7	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	5	74.8	99.7	ND	ug/kg	U
4-Methylphenol	106-44-5	5	74.8	99.7	ND	ug/kg	U
Nitrobenzene	98-95-3	5	49.9	99.7	ND	ug/kg	U
Isophorone	78-59-1	5	74.8	99.7	ND	ug/kg	U
2-Nitrophenol	88-75-5	5	49.9	99.7	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	5	249	499	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	5	49.9	99.7	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	5	249	499	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	5	49.9	99.7	ND	ug/kg	U
Naphthalene	91-20-3	5	49.9	99.7	65.3	ug/kg	J, D
Benzoic acid	65-85-0	5	499	997	ND	ug/kg	U
4-Chloroaniline	106-47-8	5	249	499	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	5	49.9	99.7	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	5	249	499	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	5	49.9	99.7	62.4	ug/kg	J, D
Hexachlorocyclopentadiene	77-47-4	5	249	499	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	5	249	499	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	5	249	499	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	5	49.9	99.7	ND	ug/kg	U
2-Nitroaniline	88-74-4	5	249	499	ND	ug/kg	U
Acenaphthylene	208-96-8	5	49.9	99.7	ND	ug/kg	U
Dimethylphthalate	131-11-3	5	49.9	99.7	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02RE1 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:10

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 16:00

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	5	249	499	ND	ug/kg	U
Acenaphthene	83-32-9	5	49.9	99.7	286	ug/kg	D
3-Nitroaniline	99-09-2	5	249	499	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	5	499	997	ND	ug/kg	U
Dibenzofuran	132-64-9	5	99.7	99.7	168	ug/kg	D
4-Nitrophenol	100-02-7	5	249	499	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	5	249	499	ND	ug/kg	U
Fluorene	86-73-7	5	99.7	99.7	221	ug/kg	D
4-Chlorophenylphenyl ether	7005-72-3	5	175	249	ND	ug/kg	U
Diethyl phthalate	84-66-2	5	175	249	ND	ug/kg	U
4-Nitroaniline	100-01-6	5	249	499	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	5	499	997	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	5	49.9	99.7	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	5	99.7	99.7	ND	ug/kg	U
Hexachlorobenzene	118-74-1	5	99.7	99.7	ND	ug/kg	U
Pentachlorophenol	87-86-5	5	249	499	ND	ug/kg	U
Phenanthrene	85-01-8	5	49.9	99.7	407	ug/kg	D
Anthracene	120-12-7	5	49.9	99.7	72.1	ug/kg	J, D
Carbazole	86-74-8	5	49.9	99.7	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	5	49.9	99.7	ND	ug/kg	U
Fluoranthene	206-44-0	5	49.9	99.7	478	ug/kg	Q, D
Pyrene	129-00-0	5	49.9	99.7	319	ug/kg	Q, D
Butylbenzylphthalate	85-68-7	5	49.9	99.7	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	5	49.9	99.7	70.4	ug/kg	J, D
3,3'-Dichlorobenzidine	91-94-1	5	249	499	ND	ug/kg	U
Chrysene	218-01-9	5	49.9	99.7	92.3	ug/kg	J, D
bis(2-Ethylhexyl)phthalate	117-81-7	5	199	249	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	5	49.9	99.7	ND	ug/kg	U
Benzofluoranthenes, Total		5	150	199	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	5	49.9	99.7	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	5	99.7	99.7	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	99.7	99.7	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	99.7	99.7	ND	ug/kg	U
Pyridine	110-86-1	5	499	499	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	5	49.9	99.7	ND	ug/kg	U
Surrogate: 2-Fluorophenol				*27-120 %*	*64.9*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*66.4*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-B

24I0008-02RE1 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:10

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 16:00

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Chlorophenol-d4		*31-120 %*	*69.3*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*32-120 %*	*67.5*	*%*	
Surrogate: Nitrobenzene-d5		*30-120 %*	*68.8*	*%*	
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*80.4*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*58.3*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*102*	*%*	Q

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:15

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 15:14

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24I0008-03 A

Preparation Batch: BMI0045 — Sample Size: 5.18 g (wet) — Dry Weight:4.15 g

Prepared: 09/03/2024 — Final Volume: 5 mL — % Solids: 80.05

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.60	1.21	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.60	1.21	ND	ug/kg	U
Bromomethane	74-83-9	1	2.41	2.41	ND	ug/kg	U
Chloroethane	75-00-3	1	2.41	2.41	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.21	2.41	ND	ug/kg	U
Acrolein	107-02-8	1	3.01	6.03	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.21	2.41	ND	ug/kg	U
Acetone	67-64-1	1	12.1	12.1	153	ug/kg	
1,1-Dichloroethene	75-35-4	1	0.60	1.21	ND	ug/kg	U
Iodomethane	74-88-4	1	1.21	1.21	ND	ug/kg	U
Methylene Chloride	75-09-2	1	6.03	6.03	ND	ug/kg	U
Acrylonitrile	107-13-1	1	6.03	6.03	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.21	1.21	2.15	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.21	1.21	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	6.03	6.03	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.60	1.21	ND	ug/kg	U
2-Butanone	78-93-3	1	3.01	6.03	5.39	ug/kg	J
2,2-Dichloropropane	594-20-7	1	0.60	1.21	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.60	1.21	ND	ug/kg	U
Chloroform	67-66-3	1	0.60	1.21	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.60	1.21	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.21	1.21	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.60	1.21	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.60	1.21	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.60	1.21	ND	ug/kg	U
Benzene	71-43-2	1	0.60	1.21	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.60	1.21	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.60	1.21	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.60	1.21	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.60	1.21	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	6.03	6.03	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	3.01	6.03	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.60	1.21	ND	ug/kg	U
Toluene	108-88-3	1	0.60	1.21	0.70	ug/kg	J
trans-1,3-Dichloropropene	10061-02-6	1	0.60	1.21	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:15

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 15:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	3.01	6.03	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.60	1.21	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.60	1.21	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.60	1.21	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.60	1.21	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.60	1.21	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.60	1.21	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.60	1.21	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.60	1.21	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.21	2.41	ND	ug/kg	U
o-Xylene	95-47-6	1	0.60	1.21	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.21	2.41	ND	ug/kg	U
Styrene	100-42-5	1	0.60	1.21	ND	ug/kg	U
Bromoform	75-25-2	1	0.60	1.21	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.60	1.21	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.41	2.41	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	6.03	6.03	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.60	1.21	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.60	1.21	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.60	1.21	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.60	1.21	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.60	1.21	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.60	1.21	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.60	1.21	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.60	1.21	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.60	1.21	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.60	1.21	1.89	ug/kg	
1,3-Dichlorobenzene	541-73-1	1	0.60	1.21	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.60	1.21	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.60	1.21	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.21	1.21	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	3.01	6.03	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	3.01	6.03	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	6.03	6.03	ND	ug/kg	U
Naphthalene	91-20-3	1	3.01	6.03	8.46	ug/kg	
1,2,3-Trichlorobenzene	87-61-6	1	3.01	6.03	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.60	1.21	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.60	1.21	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:15
Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 15:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	3.01	6.03	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*122*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*103*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*101*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*102*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 08/28/2024 13:15
Instrument: NT3 Analyst: LN — Analyzed: 09/04/2024 13:40

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24I0008-03 C
Preparation Batch: BMI0068 — Sample Size: 4.558 g (wet) — Dry Weight:3.65 g
Prepared: 09/04/2024 — Final Volume: 5 mL — % Solids: 80.05

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	8100	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*101*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*97.1*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:15
Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 01:10

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-03 E 02
	Preparation Batch: BMI0092	Sample Size: 12.49 g (wet)	Dry Weight:10.00 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 80.05
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-03 E 02
	Cleanup Batch: CMI0119	Initial Volume: 1000 uL	
	Cleaned: 11-Sep-2024	Final Volume: 1000 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	10.0	20.0	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	35.0	50.0	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	20.0	20.0	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	10.0	20.0	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	10.0	20.0	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	10.0	20.0	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	20.0	20.0	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	10.0	20.0	ND	ug/kg	U
2-Methylphenol	95-48-7	1	10.0	20.0	ND	ug/kg	U
Hexachloroethane	67-72-1	1	10.0	20.0	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	15.0	20.0	ND	ug/kg	U
4-Methylphenol	106-44-5	1	15.0	20.0	ND	ug/kg	U
Nitrobenzene	98-95-3	1	10.0	20.0	ND	ug/kg	U
Isophorone	78-59-1	1	15.0	20.0	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	10.0	20.0	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	50.0	100	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	10.0	20.0	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	50.0	100	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	10.0	20.0	ND	ug/kg	U
Naphthalene	91-20-3	1	10.0	20.0	42.0	ug/kg	
Benzoic acid	65-85-0	1	100	200	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	50.0	100	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	10.0	20.0	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	50.0	100	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	10.0	20.0	82.4	ug/kg	
Hexachlorocyclopentadiene	77-47-4	1	50.0	100	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	50.0	100	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	50.0	100	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	10.0	20.0	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	50.0	100	ND	ug/kg	U
Acenaphthylene	208-96-8	1	10.0	20.0	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	10.0	20.0	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:15

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 01:10

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	50.0	100	ND	ug/kg	U
Acenaphthene	83-32-9	1	10.0	20.0	210	ug/kg	
3-Nitroaniline	99-09-2	1	50.0	100	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	100	200	ND	ug/kg	U
Dibenzofuran	132-64-9	1	20.0	20.0	98.9	ug/kg	
4-Nitrophenol	100-02-7	1	50.0	100	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	50.0	100	ND	ug/kg	U
Fluorene	86-73-7	1	20.0	20.0	146	ug/kg	
4-Chlorophenylphenyl ether	7005-72-3	1	35.0	50.0	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	35.0	50.0	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	50.0	100	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	100	200	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	10.0	20.0	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	20.0	20.0	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	20.0	20.0	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	50.0	100	ND	ug/kg	U
Phenanthrene	85-01-8	1	10.0	20.0	309	ug/kg	
Anthracene	120-12-7	1	10.0	20.0	44.8	ug/kg	
Carbazole	86-74-8	1	10.0	20.0	18.7	ug/kg	J
Di-n-Butylphthalate	84-74-2	1	10.0	20.0	ND	ug/kg	U
Fluoranthene	206-44-0	1	10.0	20.0	183	ug/kg	
Pyrene	129-00-0	1	10.0	20.0	139	ug/kg	
Butylbenzylphthalate	85-68-7	1	10.0	20.0	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	10.0	20.0	44.1	ug/kg	
3,3'-Dichlorobenzidine	91-94-1	1	50.0	100	ND	ug/kg	U
Chrysene	218-01-9	1	10.0	20.0	57.9	ug/kg	
bis(2-Ethylhexyl)phthalate	117-81-7	1	40.0	50.0	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	10.0	20.0	ND	ug/kg	U
Benzofluoranthenes, Total		1	30.0	40.0	81.4	ug/kg	
Benzo(a)pyrene	50-32-8	1	10.0	20.0	41.7	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	20.0	20.0	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	20.0	20.0	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	20.0	20.0	ND	ug/kg	U
Pyridine	110-86-1	1	100	100	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	10.0	20.0	55.6	ug/kg	
Surrogate: 2-Fluorophenol				*27-120 %*	*54.9*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*54.1*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:15

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 01:10

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Chlorophenol-d4		*31-120 %*	*64.3*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*32-120 %*	*59.2*	*%*	
Surrogate: Nitrobenzene-d5		*30-120 %*	*63.2*	*%*	
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*62.2*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*68.7*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*74.0*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 08/28/2024 13:15
Instrument: NT17 Analyst: JZ — Analyzed: 09/11/2024 21:52

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-03 E 03
	Preparation Batch: BMI0093	Sample Size: 12.49 g (wet)	Dry Weight:10.00 g
	Prepared: 09/05/2024	Final Volume: 0.5 mL	% Solids: 80.05
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-03 E 03
	Cleanup Batch: CMI0064	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-03 E 03
	Cleanup Batch: CMI0063	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	3	7.50	15.0	85.9	ug/kg	D
2-Methylnaphthalene	91-57-6	3	7.50	15.0	307	ug/kg	D
1-Methylnaphthalene	90-12-0	3	7.50	15.0	204	ug/kg	D
Acenaphthylene	208-96-8	3	7.50	15.0	14.7	ug/kg	J, D
Acenaphthene	83-32-9	3	7.50	15.0	694	ug/kg	D
Dibenzofuran	132-64-9	3	7.50	15.0	340	ug/kg	D
Fluorene	86-73-7	3	7.50	15.0	466	ug/kg	D
Phenanthrene	85-01-8	3	7.50	15.0	660	ug/kg	D
Anthracene	120-12-7	3	7.50	15.0	81.3	ug/kg	D
Fluoranthene	206-44-0	3	7.50	15.0	271	ug/kg	D
Pyrene	129-00-0	3	7.50	15.0	210	ug/kg	D
Benzo(a)anthracene	56-55-3	3	7.50	15.0	58.7	ug/kg	D
Chrysene	218-01-9	3	7.50	15.0	76.6	ug/kg	D
Benzo(b)fluoranthene	205-99-2	3	7.50	15.0	37.4	ug/kg	D
Benzo(k)fluoranthene	207-08-9	3	7.50	15.0	17.3	ug/kg	D
Benzo(j)fluoranthene	205-82-3	3	7.50	15.0	17.9	ug/kg	D
Benzofluoranthenes, Total		3	22.5	45.0	71.5	ug/kg	D
Benzo(a)pyrene	50-32-8	3	7.50	15.0	42.9	ug/kg	D
Indeno(1,2,3-cd)pyrene	193-39-5	3	7.50	15.0	15.8	ug/kg	D
Dibenzo(a,h)anthracene	53-70-3	3	7.50	15.0	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	3	7.50	15.0	23.3	ug/kg	D
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*80.6*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*71.3*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*94.5*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 08/28/2024 13:15
Instrument: FID4 Analyst: NRB — Analyzed: 09/10/2024 13:32

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-03 E 04
	Preparation Batch: BMI0094	Sample Size: 10 g (wet)	Dry Weight:8.01 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 80.05
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-03 E 04
	Cleanup Batch: CMI0054	Initial Volume: 1 uL	
	Cleaned: 09-Sep-2024	Final Volume: 1 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-03 E 04
	Cleanup Batch: CMI0055	Initial Volume: 5 uL	
	Cleaned: 09-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	6.25	59.4	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	12.5	250	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*95.3*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 08/28/2024 13:15
Instrument: ECD5 Analyst: AA — Analyzed: 09/10/2024 21:02

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-03 E 01
	Preparation Batch: BMI0088	Sample Size: 6.28 g (wet)	Dry Weight:5.03 g
	Prepared: 09/05/2024	Final Volume: 5 mL	% Solids: 80.05
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-03 E 01
	Cleanup Batch: CMI0048	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-03 E 01
	Cleanup Batch: CMI0046	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24I0008-03 E 01
	Cleanup Batch: CMI0047	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	9.9	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	9.9	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	9.9	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	9.9	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	9.9	19.9	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	9.9	19.9	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	9.9	19.9	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.9	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.9	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*80.3*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*87.5*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*76.5*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*88.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:15
Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 13:35

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24I0008-03 G 01
	Preparation Batch: BMH0140	Sample Size: 12.5 g (wet)	Dry Weight:10.04 g
	Prepared: 09/03/2024	Final Volume: 20 uL	% Solids: 80.29
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-03 G 01
	Cleanup Batch: CMI0057	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-03 G 01
	Cleanup Batch: CMI0056	Initial Volume: 20 uL	
	Cleaned: 05-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24I0008-03 G 01
	Cleanup Batch: CMI0058	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.602	0.655-0.886		0.996	**0.883**	ng/kg	EMPC, J
2,3,7,8-TCDD			0.655-0.886	0.373	0.996	ND	ng/kg	U
1,2,3,7,8-PeCDF			1.318-1.783	0.542	0.996	ND	ng/kg	U
2,3,4,7,8-PeCDF			1.318-1.783	0.558	0.996	ND	ng/kg	U
1,2,3,7,8-PeCDD			1.318-1.783	0.725	0.996	ND	ng/kg	U
1,2,3,4,7,8-HxCDF		1.274	1.054-1.426		0.996	**0.567**	ng/kg	J
1,2,3,6,7,8-HxCDF		0.917	1.054-1.426		0.996	**0.412**	ng/kg	EMPC, J
2,3,4,6,7,8-HxCDF			1.054-1.426	0.443	0.996	ND	ng/kg	U
1,2,3,7,8,9-HxCDF			1.054-1.426	0.719	0.996	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	1.00	0.996	ND	ng/kg	U
1,2,3,6,7,8-HxCDD		1.134	1.054-1.426		0.996	**1.75**	ng/kg	
1,2,3,7,8,9-HxCDD			1.054-1.426	1.10	0.996	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDF		1.382	0.893-1.208		0.996	**7.53**	ng/kg	EMPC
1,2,3,4,7,8,9-HpCDF			0.893-1.208	1.34	0.996	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDD		0.934	0.893-1.208		2.49	**59.7**	ng/kg	
OCDF		0.861	0.757-1.024		2.49	**21.5**	ng/kg	
OCDD		0.858	0.757-1.024		9.96	**546**	ng/kg	
Homologue groups								
Total TCDF					0.996	**0.759**	ng/kg	J
Total TCDD					0.996	**9.35**	ng/kg	B
Total PeCDF					0.996	**7.40**	ng/kg	
Total PeCDD					0.996	**1.59**	ng/kg	
Total HxCDF					0.996	**9.49**	ng/kg	
Total HxCDD					0.996	**13.4**	ng/kg	
Total HpCDF					0.996	**24.8**	ng/kg	
Total HpCDD					0.996	**289**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:15

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 13:35

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					1.99		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					1.16		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					1.89		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					1.00		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:15

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 13:35

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.773*	*0.655-0.886*	*24-169 %*	*68.8*	*%*	
13C12-2,3,7,8-TCDD		*0.828*	*0.655-0.886*	*25-164 %*	*80.3*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.509*	*1.318-1.783*	*24-185 %*	*85.4*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.527*	*1.318-1.783*	*21-178 %*	*82.5*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.598*	*1.318-1.783*	*25-181 %*	*91.3*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.527*	*0.434-0.587*	*26-152 %*	*97.5*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.534*	*0.434-0.587*	*26-123 %*	*88.5*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.528*	*0.434-0.587*	*28-136 %*	*91.3*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.567*	*0.434-0.587*	*29-147 %*	*82.6*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.266*	*1.054-1.426*	*32-141 %*	*92.3*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.184*	*1.054-1.426*	*28-130 %*	*88.2*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.453*	*0.374-0.506*	*28-143 %*	*77.1*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.433*	*0.374-0.506*	*26-138 %*	*68.2*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.047*	*0.893-1.208*	*23-140 %*	*85.3*	*%*	
13C12-OCDD		*0.880*	*0.757-1.024*	*17-157 %*	*66.7*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*83.9*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:15

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 13:35

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-C

24I0008-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 08/28/2024 13:15

Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:14

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-03 F 01

Preparation Batch: BMI0146 — Sample Size: 1.028 g (wet) — Dry Weight:0.67 g

Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 64.92

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.06	0.30	6.57	mg/kg	
Cadmium	7440-43-9	20	0.04	0.15	0.11	mg/kg	J
Copper	7440-50-8	20	0.26	0.75	34.2	mg/kg	
Nickel	7440-02-0	20	0.12	0.75	43.8	mg/kg	
Selenium	7782-49-2	20	0.27	0.75	0.50	mg/kg	J
Zinc	7440-66-6	20	4.4	9.0	67.5	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 08/28/2024 13:15
Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:14

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-03 F 01
Preparation Batch: BMI0146 — Sample Size: 1.028 g (wet) — Dry Weight:0.67 g
Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 64.92

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.15	0.30	ND	mg/kg	U
Barium	7440-39-3	20	0.17	0.75	70.8	mg/kg	
Beryllium	7440-41-7	20	0.03	0.30	0.25	mg/kg	J
Chromium	7440-47-3	100	1.95	3.75	36.4	mg/kg	D
Lead	7439-92-1	20	0.08	0.15	9.42	mg/kg	
Silver	7440-22-4	20	0.03	0.30	0.08	mg/kg	J
Thallium	7440-28-0	20	0.04	0.30	0.07	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 08/28/2024 13:15
Instrument: HYDRA Analyst: ml — Analyzed: 09/09/2024 13:12

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24I0008-03 F
Preparation Batch: BMI0056 — Sample Size: 0.232 g (wet) — Dry Weight:0.15 g
Prepared: 09/04/2024 — Final Volume: 50 mL — % Solids: 64.92

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00697	0.0332	0.0371	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-C

24I0008-03 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 08/28/2024 13:15
Instrument: N/A Analyst: TW — Analyzed: 09/03/2024 05:00

Sample Preparation: Preparation Method: No Prep-Organics — Extract ID: 24I0008-03
Preparation Batch: BMI0018 — Sample Size: 1 g (wet)
Prepared: 09/02/2024 — Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**80.29**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:20
Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 15:40

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24I0008-04 A
Preparation Batch: BMI0045 — Sample Size: 4.62 g (wet) — Dry Weight:4.35 g
Prepared: 09/03/2024 — Final Volume: 5 mL — % Solids: 94.26

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.57	1.15	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.57	1.15	ND	ug/kg	U
Bromomethane	74-83-9	1	2.30	2.30	ND	ug/kg	U
Chloroethane	75-00-3	1	2.30	2.30	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.15	2.30	ND	ug/kg	U
Acrolein	107-02-8	1	2.87	5.74	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.15	2.30	ND	ug/kg	U
Acetone	67-64-1	1	11.5	11.5	62.2	ug/kg	
1,1-Dichloroethene	75-35-4	1	0.57	1.15	ND	ug/kg	U
Iodomethane	74-88-4	1	1.15	1.15	ND	ug/kg	U
Methylene Chloride	75-09-2	1	5.74	5.74	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.74	5.74	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.15	1.15	5.40	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.15	1.15	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.74	5.74	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.57	1.15	ND	ug/kg	U
2-Butanone	78-93-3	1	2.87	5.74	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.57	1.15	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.57	1.15	ND	ug/kg	U
Chloroform	67-66-3	1	0.57	1.15	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.57	1.15	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.15	1.15	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.57	1.15	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.57	1.15	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.57	1.15	ND	ug/kg	U
Benzene	71-43-2	1	0.57	1.15	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.57	1.15	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.57	1.15	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.57	1.15	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.57	1.15	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.74	5.74	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.87	5.74	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.57	1.15	ND	ug/kg	U
Toluene	108-88-3	1	0.57	1.15	ND	ug/kg	U
trans-1,3-Dichloropropene	10061-02-6	1	0.57	1.15	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:20

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.87	5.74	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.57	1.15	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.57	1.15	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.57	1.15	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.57	1.15	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.57	1.15	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.57	1.15	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.57	1.15	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.57	1.15	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.15	2.30	ND	ug/kg	U
o-Xylene	95-47-6	1	0.57	1.15	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.15	2.30	ND	ug/kg	U
Styrene	100-42-5	1	0.57	1.15	ND	ug/kg	U
Bromoform	75-25-2	1	0.57	1.15	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.57	1.15	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.30	2.30	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.74	5.74	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.57	1.15	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.57	1.15	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.57	1.15	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.57	1.15	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.57	1.15	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.57	1.15	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.57	1.15	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.57	1.15	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.57	1.15	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.57	1.15	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.57	1.15	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.57	1.15	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.57	1.15	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.15	1.15	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.87	5.74	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.87	5.74	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.74	5.74	ND	ug/kg	U
Naphthalene	91-20-3	1	2.87	5.74	3.06	ug/kg	J
1,2,3-Trichlorobenzene	87-61-6	1	2.87	5.74	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.57	1.15	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.57	1.15	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:20

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 15:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.87	5.74	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*118*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*97.1*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*104*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*104*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 08/28/2024 13:20

Instrument: NT3 Analyst: LN — Analyzed: 09/04/2024 14:02

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24I0008-04 C

Preparation Batch: BMI0068 — Sample Size: 4.562 g (wet) — Dry Weight:4.30 g

Prepared: 09/04/2024 — Final Volume: 5 mL — % Solids: 94.26

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	6120	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*95.3*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:20

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 01:50

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-04 E 02
	Preparation Batch: BMI0092	Sample Size: 10.63 g (wet)	Dry Weight:10.02 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 94.26
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-04 E 02
	Cleanup Batch: CMI0119	Initial Volume: 1000 uL	
	Cleaned: 11-Sep-2024	Final Volume: 1000 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	10.0	20.0	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	34.9	49.9	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	20.0	20.0	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	10.0	20.0	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	10.0	20.0	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	10.0	20.0	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	20.0	20.0	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	10.0	20.0	ND	ug/kg	U
2-Methylphenol	95-48-7	1	10.0	20.0	ND	ug/kg	U
Hexachloroethane	67-72-1	1	10.0	20.0	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	15.0	20.0	ND	ug/kg	U
4-Methylphenol	106-44-5	1	15.0	20.0	ND	ug/kg	U
Nitrobenzene	98-95-3	1	10.0	20.0	ND	ug/kg	U
Isophorone	78-59-1	1	15.0	20.0	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	10.0	20.0	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	49.9	99.8	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	10.0	20.0	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	49.9	99.8	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	10.0	20.0	ND	ug/kg	U
Naphthalene	91-20-3	1	10.0	20.0	51.1	ug/kg	
Benzoic acid	65-85-0	1	99.8	200	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	49.9	99.8	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	10.0	20.0	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	49.9	99.8	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	10.0	20.0	19.9	ug/kg	J
Hexachlorocyclopentadiene	77-47-4	1	49.9	99.8	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	49.9	99.8	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	49.9	99.8	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	10.0	20.0	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	49.9	99.8	ND	ug/kg	U
Acenaphthylene	208-96-8	1	10.0	20.0	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	10.0	20.0	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:20

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 01:50

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	49.9	99.8	ND	ug/kg	U
Acenaphthene	83-32-9	1	10.0	20.0	27.1	ug/kg	
3-Nitroaniline	99-09-2	1	49.9	99.8	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	99.8	200	ND	ug/kg	U
Dibenzofuran	132-64-9	1	20.0	20.0	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	49.9	99.8	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	49.9	99.8	ND	ug/kg	U
Fluorene	86-73-7	1	20.0	20.0	21.2	ug/kg	
4-Chlorophenylphenyl ether	7005-72-3	1	34.9	49.9	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	34.9	49.9	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	49.9	99.8	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	99.8	200	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	10.0	20.0	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	20.0	20.0	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	20.0	20.0	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	49.9	99.8	ND	ug/kg	U
Phenanthrene	85-01-8	1	10.0	20.0	77.4	ug/kg	
Anthracene	120-12-7	1	10.0	20.0	13.9	ug/kg	J
Carbazole	86-74-8	1	10.0	20.0	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	10.0	20.0	ND	ug/kg	U
Fluoranthene	206-44-0	1	10.0	20.0	99.2	ug/kg	
Pyrene	129-00-0	1	10.0	20.0	87.9	ug/kg	
Butylbenzylphthalate	85-68-7	1	10.0	20.0	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	10.0	20.0	20.7	ug/kg	
3,3'-Dichlorobenzidine	91-94-1	1	49.9	99.8	ND	ug/kg	U
Chrysene	218-01-9	1	10.0	20.0	25.9	ug/kg	
bis(2-Ethylhexyl)phthalate	117-81-7	1	39.9	49.9	58.0	ug/kg	
Di-n-Octylphthalate	117-84-0	1	10.0	20.0	ND	ug/kg	U
Benzofluoranthenes, Total		1	29.9	39.9	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	10.0	20.0	13.2	ug/kg	J
Indeno(1,2,3-cd)pyrene	193-39-5	1	20.0	20.0	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	20.0	20.0	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	20.0	20.0	ND	ug/kg	U
Pyridine	110-86-1	1	99.8	99.8	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	10.0	20.0	10.5	ug/kg	J
Surrogate: 2-Fluorophenol				*27-120 %*	*57.2*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*58.7*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:20

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 01:50

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Chlorophenol-d4		*31-120 %*	*67.8*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*32-120 %*	*63.8*	*%*	
Surrogate: Nitrobenzene-d5		*30-120 %*	*67.6*	*%*	
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*67.7*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*75.5*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*75.7*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 08/28/2024 13:20
Instrument: NT17 Analyst: JZ — Analyzed: 09/11/2024 23:22

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-04 E 03
	Preparation Batch: BMI0093	Sample Size: 10.63 g (wet)	Dry Weight:10.02 g
	Prepared: 09/05/2024	Final Volume: 0.5 mL	% Solids: 94.26
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-04 E 03
	Cleanup Batch: CMI0064	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-04 E 03
	Cleanup Batch: CMI0063	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	3	7.49	15.0	106	ug/kg	D
2-Methylnaphthalene	91-57-6	3	7.49	15.0	57.4	ug/kg	D
1-Methylnaphthalene	90-12-0	3	7.49	15.0	34.8	ug/kg	D
Acenaphthylene	208-96-8	3	7.49	15.0	ND	ug/kg	U
Acenaphthene	83-32-9	3	7.49	15.0	95.8	ug/kg	D
Dibenzofuran	132-64-9	3	7.49	15.0	49.4	ug/kg	D
Fluorene	86-73-7	3	7.49	15.0	63.3	ug/kg	D
Phenanthrene	85-01-8	3	7.49	15.0	191	ug/kg	D
Anthracene	120-12-7	3	7.49	15.0	33.1	ug/kg	D
Fluoranthene	206-44-0	3	7.49	15.0	219	ug/kg	D
Pyrene	129-00-0	3	7.49	15.0	246	ug/kg	D
Benzo(a)anthracene	56-55-3	3	7.49	15.0	42.3	ug/kg	D
Chrysene	218-01-9	3	7.49	15.0	78.6	ug/kg	D
Benzo(b)fluoranthene	205-99-2	3	7.49	15.0	44.4	ug/kg	D
Benzo(k)fluoranthene	207-08-9	3	7.49	15.0	18.8	ug/kg	D
Benzo(j)fluoranthene	205-82-3	3	7.49	15.0	18.1	ug/kg	D
Benzofluoranthenes, Total		3	22.5	44.9	82.1	ug/kg	D
Benzo(a)pyrene	50-32-8	3	7.49	15.0	33.6	ug/kg	D
Indeno(1,2,3-cd)pyrene	193-39-5	3	7.49	15.0	13.7	ug/kg	J, D
Dibenzo(a,h)anthracene	53-70-3	3	7.49	15.0	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	3	7.49	15.0	22.7	ug/kg	D
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*80.9*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*56.4*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*96.6*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 08/28/2024 13:20
Instrument: FID4 Analyst: NRB — Analyzed: 09/10/2024 13:52

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-04 E 04
	Preparation Batch: BMI0094	Sample Size: 10 g (wet)	Dry Weight:9.43 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 94.26
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-04 E 04
	Cleanup Batch: CMI0054	Initial Volume: 1 uL	
	Cleaned: 09-Sep-2024	Final Volume: 1 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-04 E 04
	Cleanup Batch: CMI0055	Initial Volume: 5 uL	
	Cleaned: 09-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.30	13.3	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	10.6	67.6	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*99.6*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 08/28/2024 13:20
Instrument: ECD5 Analyst: AA — Analyzed: 09/10/2024 21:23

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-04 E 01
	Preparation Batch: BMI0088	Sample Size: 5.34 g (wet)	Dry Weight:5.03 g
	Prepared: 09/05/2024	Final Volume: 5 mL	% Solids: 94.26
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-04 E 01
	Cleanup Batch: CMI0048	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-04 E 01
	Cleanup Batch: CMI0046	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24I0008-04 E 01
	Cleanup Batch: CMI0047	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	9.9	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	9.9	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	9.9	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	9.9	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	9.9	19.9	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	9.9	19.9	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	9.9	19.9	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.9	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.9	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*88.2*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*91.9*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*83.2*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*89.1*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:20
Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 14:25

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24I0008-04 G 01
	Preparation Batch: BMH0140	Sample Size: 10.56 g (wet)	Dry Weight:10.00 g
	Prepared: 09/03/2024	Final Volume: 20 uL	% Solids: 94.71
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-04 G 01
	Cleanup Batch: CMI0057	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-04 G 01
	Cleanup Batch: CMI0056	Initial Volume: 20 uL	
	Cleaned: 05-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24I0008-04 G 01
	Cleanup Batch: CMI0058	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF			0.655-0.886	0.392	1.00	ND	ng/kg	U
2,3,7,8-TCDD			0.655-0.886	0.417	1.00	ND	ng/kg	U
1,2,3,7,8-PeCDF			1.318-1.783	0.451	1.00	ND	ng/kg	U
2,3,4,7,8-PeCDF			1.318-1.783	0.481	1.00	ND	ng/kg	U
1,2,3,7,8-PeCDD			1.318-1.783	0.690	1.00	ND	ng/kg	U
1,2,3,4,7,8-HxCDF			1.054-1.426	0.601	1.00	ND	ng/kg	U
1,2,3,6,7,8-HxCDF			1.054-1.426	0.633	1.00	ND	ng/kg	U
2,3,4,6,7,8-HxCDF			1.054-1.426	0.653	1.00	ND	ng/kg	U
1,2,3,7,8,9-HxCDF			1.054-1.426	1.02	1.00	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	0.674	1.00	ND	ng/kg	U
1,2,3,6,7,8-HxCDD			1.054-1.426	0.675	1.00	ND	ng/kg	U
1,2,3,7,8,9-HxCDD			1.054-1.426	0.732	1.00	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDF		0.899	0.893-1.208		1.00	**2.84**	ng/kg	
1,2,3,4,7,8,9-HpCDF			0.893-1.208	1.20	1.00	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDD		1.115	0.893-1.208		2.50	**9.38**	ng/kg	
OCDF		0.879	0.757-1.024		2.50	**2.30**	ng/kg	J
OCDD		0.840	0.757-1.024		10.0	**85.6**	ng/kg	
Homologue groups								
Total TCDF					1.00	ND	ng/kg	U
Total TCDD					1.00	**1.30**	ng/kg	B
Total PeCDF					1.00	**1.11**	ng/kg	
Total PeCDD					1.00	ND	ng/kg	U
Total HxCDF					1.00	**1.58**	ng/kg	
Total HxCDD					1.00	**3.26**	ng/kg	
Total HpCDF					1.00	**2.84**	ng/kg	
Total HpCDD					1.00	**36.4**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:20

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 14:25

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					1.06		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					0.15		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					1.06		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					0.15		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:20

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 14:25

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.769*	*0.655-0.886*	*24-169 %*	*74.6*	*%*	
13C12-2,3,7,8-TCDD		*0.795*	*0.655-0.886*	*25-164 %*	*83.9*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.508*	*1.318-1.783*	*24-185 %*	*77.3*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.474*	*1.318-1.783*	*21-178 %*	*70.4*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.614*	*1.318-1.783*	*25-181 %*	*79.9*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.522*	*0.434-0.587*	*26-152 %*	*105*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.586*	*0.434-0.587*	*26-123 %*	*98.6*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.526*	*0.434-0.587*	*28-136 %*	*100*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.482*	*0.434-0.587*	*29-147 %*	*85.8*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.227*	*1.054-1.426*	*32-141 %*	*101*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.224*	*1.054-1.426*	*28-130 %*	*97.3*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.428*	*0.374-0.506*	*28-143 %*	*74.4*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.422*	*0.374-0.506*	*26-138 %*	*66.1*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.039*	*0.893-1.208*	*23-140 %*	*83.9*	*%*	
13C12-OCDD		*0.892*	*0.757-1.024*	*17-157 %*	*69.6*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*81.5*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:20

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 14:25

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-D

24I0008-04 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 08/28/2024 13:20

Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:19

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-04 F 01

Preparation Batch: BMI0146 — Sample Size: 1.027 g (wet) — Dry Weight:0.97 g

Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 94.49

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.21	5.52	mg/kg	
Cadmium	7440-43-9	20	0.03	0.10	0.06	mg/kg	J
Copper	7440-50-8	20	0.18	0.52	18.5	mg/kg	
Nickel	7440-02-0	20	0.23	0.52	24.4	mg/kg	
Selenium	7782-49-2	20	0.19	0.52	0.45	mg/kg	J
Zinc	7440-66-6	20	3.0	6.2	43.5	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 08/28/2024 13:20
Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:19

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-04 F 01
Preparation Batch: BMI0146 — Sample Size: 1.027 g (wet) — Dry Weight:0.97 g
Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 94.49

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.11	0.21	ND	mg/kg	U
Barium	7440-39-3	20	0.12	0.52	29.2	mg/kg	
Beryllium	7440-41-7	20	0.02	0.21	0.18	mg/kg	J
Chromium	7440-47-3	100	1.34	2.58	23.9	mg/kg	D
Lead	7439-92-1	20	0.05	0.10	3.92	mg/kg	
Silver	7440-22-4	20	0.02	0.21	0.05	mg/kg	J
Thallium	7440-28-0	20	0.02	0.21	0.04	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 08/28/2024 13:20
Instrument: HYDRA Analyst: ml — Analyzed: 09/09/2024 13:15

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24I0008-04 F
Preparation Batch: BMI0056 — Sample Size: 0.237 g (wet) — Dry Weight:0.22 g
Prepared: 09/04/2024 — Final Volume: 50 mL — % Solids: 94.49

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00469	0.0223	0.0107	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-D

24I0008-04 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 08/28/2024 13:20
Instrument: N/A Analyst: TW — Analyzed: 09/03/2024 05:00

Sample Preparation: Preparation Method: No Prep-Organics; Preparation Batch: BMI0018; Prepared: 09/02/2024; Sample Size: 1 g (wet); Final Volume: 1 g — Extract ID: 24I0008-04

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**94.71**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:25
Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 16:05

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24I0008-05 A
Preparation Batch: BMI0045 — Sample Size: 5.13 g (wet) — Dry Weight:4.61 g
Prepared: 09/03/2024 — Final Volume: 5 mL — % Solids: 89.77

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.54	1.09	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.54	1.09	ND	ug/kg	U
Bromomethane	74-83-9	1	2.17	2.17	ND	ug/kg	U
Chloroethane	75-00-3	1	2.17	2.17	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.09	2.17	ND	ug/kg	U
Acrolein	107-02-8	1	2.71	5.43	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.09	2.17	ND	ug/kg	U
Acetone	67-64-1	1	10.9	10.9	96.2	ug/kg	
1,1-Dichloroethene	75-35-4	1	0.54	1.09	ND	ug/kg	U
Iodomethane	74-88-4	1	1.09	1.09	ND	ug/kg	U
Methylene Chloride	75-09-2	1	5.43	5.43	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.43	5.43	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.09	1.09	2.69	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.09	1.09	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.43	5.43	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.54	1.09	ND	ug/kg	U
2-Butanone	78-93-3	1	2.71	5.43	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.54	1.09	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.54	1.09	ND	ug/kg	U
Chloroform	67-66-3	1	0.54	1.09	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.54	1.09	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.09	1.09	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.54	1.09	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.54	1.09	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.54	1.09	ND	ug/kg	U
Benzene	71-43-2	1	0.54	1.09	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.54	1.09	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.54	1.09	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.54	1.09	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.54	1.09	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.43	5.43	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.71	5.43	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.54	1.09	ND	ug/kg	U
Toluene	108-88-3	1	0.54	1.09	1.16	ug/kg	
trans-1,3-Dichloropropene	10061-02-6	1	0.54	1.09	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:25

Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 16:05

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.71	5.43	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.54	1.09	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.54	1.09	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.54	1.09	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.54	1.09	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.54	1.09	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.54	1.09	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.54	1.09	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.54	1.09	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.09	2.17	ND	ug/kg	U
o-Xylene	95-47-6	1	0.54	1.09	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.09	2.17	ND	ug/kg	U
Styrene	100-42-5	1	0.54	1.09	ND	ug/kg	U
Bromoform	75-25-2	1	0.54	1.09	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.54	1.09	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.17	2.17	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.43	5.43	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.54	1.09	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.54	1.09	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.54	1.09	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.54	1.09	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.54	1.09	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.54	1.09	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.54	1.09	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.54	1.09	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.54	1.09	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.54	1.09	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.54	1.09	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.54	1.09	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.54	1.09	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.09	1.09	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.71	5.43	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.71	5.43	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.43	5.43	ND	ug/kg	U
Naphthalene	91-20-3	1	2.71	5.43	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	2.71	5.43	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.54	1.09	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.54	1.09	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 08/28/2024 13:25
Instrument: NT5 Analyst: PKC — Analyzed: 09/03/2024 16:05

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.71	5.43	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*131*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*108*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*97.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*106*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 08/28/2024 13:25
Instrument: NT3 Analyst: LN — Analyzed: 09/04/2024 14:24

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24I0008-05 C
Preparation Batch: BMI0068 — Sample Size: 4.605 g (wet) — Dry Weight:4.13 g
Prepared: 09/04/2024 — Final Volume: 5 mL — % Solids: 89.77

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	6620	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*101*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*98.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:25
Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 02:29

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-05 E 02
	Preparation Batch: BMI0092	Sample Size: 11.15 g (wet)	Dry Weight:10.01 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 89.77
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-05 E 02
	Cleanup Batch: CMI0119	Initial Volume: 1000 uL	
	Cleaned: 11-Sep-2024	Final Volume: 1000 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	10.0	20.0	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	35.0	50.0	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	20.0	20.0	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	10.0	20.0	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	10.0	20.0	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	10.0	20.0	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	20.0	20.0	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	10.0	20.0	ND	ug/kg	U
2-Methylphenol	95-48-7	1	10.0	20.0	ND	ug/kg	U
Hexachloroethane	67-72-1	1	10.0	20.0	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	15.0	20.0	ND	ug/kg	U
4-Methylphenol	106-44-5	1	15.0	20.0	ND	ug/kg	U
Nitrobenzene	98-95-3	1	10.0	20.0	ND	ug/kg	U
Isophorone	78-59-1	1	15.0	20.0	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	10.0	20.0	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	50.0	99.9	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	10.0	20.0	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	50.0	99.9	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	10.0	20.0	ND	ug/kg	U
Naphthalene	91-20-3	1	10.0	20.0	58.8	ug/kg	
Benzoic acid	65-85-0	1	99.9	200	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	50.0	99.9	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	10.0	20.0	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	50.0	99.9	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	10.0	20.0	42.1	ug/kg	
Hexachlorocyclopentadiene	77-47-4	1	50.0	99.9	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	50.0	99.9	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	50.0	99.9	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	10.0	20.0	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	50.0	99.9	ND	ug/kg	U
Acenaphthylene	208-96-8	1	10.0	20.0	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	10.0	20.0	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:25

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 02:29

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	50.0	99.9	ND	ug/kg	U
Acenaphthene	83-32-9	1	10.0	20.0	53.4	ug/kg	
3-Nitroaniline	99-09-2	1	50.0	99.9	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	99.9	200	ND	ug/kg	U
Dibenzofuran	132-64-9	1	20.0	20.0	39.4	ug/kg	
4-Nitrophenol	100-02-7	1	50.0	99.9	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	50.0	99.9	ND	ug/kg	U
Fluorene	86-73-7	1	20.0	20.0	44.7	ug/kg	
4-Chlorophenylphenyl ether	7005-72-3	1	35.0	50.0	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	35.0	50.0	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	50.0	99.9	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	99.9	200	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	10.0	20.0	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	20.0	20.0	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	20.0	20.0	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	50.0	99.9	ND	ug/kg	U
Phenanthrene	85-01-8	1	10.0	20.0	109	ug/kg	
Anthracene	120-12-7	1	10.0	20.0	21.9	ug/kg	
Carbazole	86-74-8	1	10.0	20.0	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	10.0	20.0	ND	ug/kg	U
Fluoranthene	206-44-0	1	10.0	20.0	146	ug/kg	
Pyrene	129-00-0	1	10.0	20.0	231	ug/kg	
Butylbenzylphthalate	85-68-7	1	10.0	20.0	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	10.0	20.0	40.4	ug/kg	
3,3'-Dichlorobenzidine	91-94-1	1	50.0	99.9	ND	ug/kg	U
Chrysene	218-01-9	1	10.0	20.0	110	ug/kg	
bis(2-Ethylhexyl)phthalate	117-81-7	1	40.0	50.0	64.2	ug/kg	
Di-n-Octylphthalate	117-84-0	1	10.0	20.0	ND	ug/kg	U
Benzofluoranthenes, Total		1	30.0	40.0	122	ug/kg	
Benzo(a)pyrene	50-32-8	1	10.0	20.0	48.0	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	20.0	20.0	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	20.0	20.0	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	20.0	20.0	23.0	ug/kg	Q
Pyridine	110-86-1	1	99.9	99.9	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	10.0	20.0	23.3	ug/kg	
Surrogate: 2-Fluorophenol				*27-120 %*	*60.4*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*62.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:25

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 02:29

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Chlorophenol-d4		*31-120 %*	*74.7*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*32-120 %*	*71.4*	*%*	
Surrogate: Nitrobenzene-d5		*30-120 %*	*73.8*	*%*	
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*73.9*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*83.0*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*101*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 08/28/2024 13:25
Instrument: NT17 Analyst: JZ — Analyzed: 09/11/2024 23:53

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-05 E 03
	Preparation Batch: BMI0093	Sample Size: 11.14 g (wet)	Dry Weight:10.00 g
	Prepared: 09/05/2024	Final Volume: 0.5 mL	% Solids: 89.77
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-05 E 03
	Cleanup Batch: CMI0064	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-05 E 03
	Cleanup Batch: CMI0063	Initial Volume: 0.5 uL	
	Cleaned: 10-Sep-2024	Final Volume: 0.5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	2.50	5.00	67.3	ug/kg	
2-Methylnaphthalene	91-57-6	1	2.50	5.00	30.8	ug/kg	
1-Methylnaphthalene	90-12-0	1	2.50	5.00	15.5	ug/kg	
Acenaphthylene	208-96-8	1	2.50	5.00	2.96	ug/kg	J
Acenaphthene	83-32-9	1	2.50	5.00	41.0	ug/kg	
Dibenzofuran	132-64-9	1	2.50	5.00	24.7	ug/kg	
Fluorene	86-73-7	1	2.50	5.00	28.1	ug/kg	
Phenanthrene	85-01-8	1	2.50	5.00	77.9	ug/kg	
Anthracene	120-12-7	1	2.50	5.00	14.3	ug/kg	
Fluoranthene	206-44-0	1	2.50	5.00	125	ug/kg	
Pyrene	129-00-0	1	2.50	5.00	107	ug/kg	
Benzo(a)anthracene	56-55-3	1	2.50	5.00	34.6	ug/kg	
Chrysene	218-01-9	1	2.50	5.00	39.9	ug/kg	
Benzo(b)fluoranthene	205-99-2	1	2.50	5.00	24.4	ug/kg	
Benzo(k)fluoranthene	207-08-9	1	2.50	5.00	14.6	ug/kg	
Benzo(j)fluoranthene	205-82-3	1	2.50	5.00	12.8	ug/kg	
Benzofluoranthenes, Total		1	7.50	15.0	51.9	ug/kg	
Benzo(a)pyrene	50-32-8	1	2.50	5.00	22.8	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	2.50	5.00	10.3	ug/kg	
Dibenzo(a,h)anthracene	53-70-3	1	2.50	5.00	2.69	ug/kg	J
Benzo(g,h,i)perylene	191-24-2	1	2.50	5.00	11.1	ug/kg	
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*74.0*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*78.0*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*89.9*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 08/28/2024 13:25
Instrument: FID4 Analyst: NRB — Analyzed: 09/10/2024 14:54

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-05 E 04
	Preparation Batch: BMI0094	Sample Size: 10 g (wet)	Dry Weight:8.98 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 89.77
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-05 E 04
	Cleanup Batch: CMI0054	Initial Volume: 1 uL	
	Cleaned: 09-Sep-2024	Final Volume: 1 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-05 E 04
	Cleanup Batch: CMI0055	Initial Volume: 5 uL	
	Cleaned: 09-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.57	55.6	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	11.1	258	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*97.7*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 08/28/2024 13:25
Instrument: ECD5 Analyst: AA — Analyzed: 09/10/2024 21:44

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-05 E 01
	Preparation Batch: BMI0088	Sample Size: 5.59 g (wet)	Dry Weight:5.02 g
	Prepared: 09/05/2024	Final Volume: 5 mL	% Solids: 89.77
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-05 E 01
	Cleanup Batch: CMI0048	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-05 E 01
	Cleanup Batch: CMI0046	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24I0008-05 E 01
	Cleanup Batch: CMI0047	Initial Volume: 5 uL	
	Cleaned: 07-Sep-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	10.0	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	10.0	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	10.0	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	10.0	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	10.0	19.9	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	10.0	19.9	40.0	ug/kg	
Aroclor 1260	11096-82-5	1	10.0	19.9	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	10.0	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	10.0	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*78.5*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*83.2*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*72.8*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*82.0*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:25
Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 15:14

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24I0008-05 G 01
	Preparation Batch: BMH0140	Sample Size: 11.13 g (wet)	Dry Weight:10.00 g
	Prepared: 09/03/2024	Final Volume: 20 uL	% Solids: 89.89
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24I0008-05 G 01
	Cleanup Batch: CMI0057	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24I0008-05 G 01
	Cleanup Batch: CMI0056	Initial Volume: 20 uL	
	Cleaned: 05-Sep-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24I0008-05 G 01
	Cleanup Batch: CMI0058	Initial Volume: 20 uL	
	Cleaned: 06-Sep-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.526	0.655-0.886		1.00	**0.870**	ng/kg	EMPC, J
2,3,7,8-TCDD			0.655-0.886	0.349	1.00	ND	ng/kg	U
1,2,3,7,8-PeCDF			1.318-1.783	0.444	1.00	ND	ng/kg	U
2,3,4,7,8-PeCDF			1.318-1.783	0.508	1.00	ND	ng/kg	U
1,2,3,7,8-PeCDD			1.318-1.783	0.708	1.00	ND	ng/kg	U
1,2,3,4,7,8-HxCDF		0.978	1.054-1.426		1.00	**1.41**	ng/kg	EMPC
1,2,3,6,7,8-HxCDF		0.854	1.054-1.426		1.00	**0.654**	ng/kg	EMPC, J
2,3,4,6,7,8-HxCDF			1.054-1.426	0.540	1.00	ND	ng/kg	U
1,2,3,7,8,9-HxCDF			1.054-1.426	0.773	1.00	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	0.930	1.00	ND	ng/kg	U
1,2,3,6,7,8-HxCDD		1.298	1.054-1.426		1.00	**3.17**	ng/kg	
1,2,3,7,8,9-HxCDD		1.196	1.054-1.426		1.00	**0.811**	ng/kg	J
1,2,3,4,6,7,8-HpCDF		1.032	0.893-1.208		1.00	**34.1**	ng/kg	
1,2,3,4,7,8,9-HpCDF		0.943	0.893-1.208		1.00	**1.02**	ng/kg	
1,2,3,4,6,7,8-HpCDD		1.042	0.893-1.208		2.50	**157**	ng/kg	
OCDF		0.864	0.757-1.024		2.50	**183**	ng/kg	
OCDD		0.839	0.757-1.024		10.0	**1970**	ng/kg	
Homologue groups								
Total TCDF					1.00	**1.33**	ng/kg	
Total TCDD					1.00	**20.3**	ng/kg	B
Total PeCDF					1.00	**0.905**	ng/kg	J
Total PeCDD					1.00	**12.4**	ng/kg	
Total HxCDF					1.00	**43.5**	ng/kg	
Total HxCDD					1.00	**52.4**	ng/kg	
Total HpCDF					1.00	**217**	ng/kg	
Total HpCDD					1.00	**655**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:25

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 15:14

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					3.95		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					3.17		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					3.80		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					2.87		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:25

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 15:14

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.761*	*0.655-0.886*	*24-169 %*	*75.6*	*%*	
13C12-2,3,7,8-TCDD		*0.814*	*0.655-0.886*	*25-164 %*	*85.7*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.515*	*1.318-1.783*	*24-185 %*	*78.2*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.529*	*1.318-1.783*	*21-178 %*	*63.5*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.601*	*1.318-1.783*	*25-181 %*	*73.6*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.506*	*0.434-0.587*	*26-152 %*	*99.7*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.541*	*0.434-0.587*	*26-123 %*	*90.8*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.557*	*0.434-0.587*	*28-136 %*	*91.9*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.528*	*0.434-0.587*	*29-147 %*	*83.1*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.234*	*1.054-1.426*	*32-141 %*	*94.4*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.245*	*1.054-1.426*	*28-130 %*	*87.0*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.430*	*0.374-0.506*	*28-143 %*	*66.7*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.460*	*0.374-0.506*	*26-138 %*	*56.4*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.033*	*0.893-1.208*	*23-140 %*	*71.7*	*%*	
13C12-OCDD		*0.889*	*0.757-1.024*	*17-157 %*	*44.7*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*84.5*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 08/28/2024 13:25

Instrument: AUTOSPEC01 Analyst: pk — Analyzed: 09/14/2024 15:14

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-E

24I0008-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 08/28/2024 13:25

Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:24

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-05 F 01

Preparation Batch: BMI0146 — Sample Size: 1.01 g (wet) — Dry Weight:0.92 g

Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 90.80

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.22	7.00	mg/kg	
Cadmium	7440-43-9	20	0.03	0.11	0.15	mg/kg	
Copper	7440-50-8	20	0.19	0.55	29.2	mg/kg	
Nickel	7440-02-0	20	0.09	0.55	32.0	mg/kg	
Selenium	7782-49-2	20	0.20	0.55	0.45	mg/kg	J
Zinc	7440-66-6	20	3.2	6.5	78.9	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 08/28/2024 13:25
Instrument: ICPMS1 Analyst: DOE — Analyzed: 09/12/2024 22:24

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24I0008-05 F 01
Preparation Batch: BMI0146 — Sample Size: 1.01 g (wet) — Dry Weight:0.92 g
Prepared: 09/10/2024 — Final Volume: 50 mL — % Solids: 90.80

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.11	0.22	ND	mg/kg	U
Barium	7440-39-3	20	0.12	0.55	69.7	mg/kg	
Beryllium	7440-41-7	20	0.02	0.22	0.19	mg/kg	J
Chromium	7440-47-3	100	1.42	2.73	21.6	mg/kg	D
Lead	7439-92-1	20	0.06	0.11	22.4	mg/kg	
Silver	7440-22-4	20	0.02	0.22	0.06	mg/kg	J
Thallium	7440-28-0	20	0.03	0.22	0.05	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 08/28/2024 13:25
Instrument: HYDRA Analyst: ml — Analyzed: 09/09/2024 13:17

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24I0008-05 F
Preparation Batch: BMI0056 — Sample Size: 0.23 g (wet) — Dry Weight:0.21 g
Prepared: 09/04/2024 — Final Volume: 50 mL — % Solids: 90.80

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00503	0.0239	0.0728	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 08/28/2024 13:25
Instrument: N/A Analyst: TW — Analyzed: 09/03/2024 05:00

Sample Preparation: Preparation Method: No Prep-Organics — Extract ID: 24I0008-05
Preparation Batch: BMI0018 — Sample Size: 1 g (wet)
Prepared: 09/02/2024 — Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**89.89**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05RE1 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:25
Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 16:40

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24I0008-05RE1 E 02
	Preparation Batch: BMI0092	Sample Size: 11.15 g (wet)	Dry Weight:10.01 g
	Prepared: 09/05/2024	Final Volume: 1 mL	% Solids: 89.77
Sample Cleanup:	Cleanup Method: GPC		Extract ID:24I0008-05RE1 E 02
	Cleanup Batch: CMI0119	Initial Volume: 1000 uL	
	Cleaned: 11-Sep-2024	Final Volume: 1000 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	5	50.0	99.9	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	5	175	250	ND	ug/kg	U
2-Chlorophenol	95-57-8	5	99.9	99.9	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	5	50.0	99.9	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	5	50.0	99.9	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	5	50.0	99.9	ND	ug/kg	U
Benzyl Alcohol	100-51-6	5	99.9	99.9	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	5	50.0	99.9	ND	ug/kg	U
2-Methylphenol	95-48-7	5	50.0	99.9	ND	ug/kg	U
Hexachloroethane	67-72-1	5	50.0	99.9	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	5	74.9	99.9	ND	ug/kg	U
4-Methylphenol	106-44-5	5	74.9	99.9	ND	ug/kg	U
Nitrobenzene	98-95-3	5	50.0	99.9	ND	ug/kg	U
Isophorone	78-59-1	5	74.9	99.9	ND	ug/kg	U
2-Nitrophenol	88-75-5	5	50.0	99.9	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	5	250	500	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	5	50.0	99.9	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	5	250	500	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	5	50.0	99.9	ND	ug/kg	U
Naphthalene	91-20-3	5	50.0	99.9	59.1	ug/kg	J, D
Benzoic acid	65-85-0	5	500	999	ND	ug/kg	U
4-Chloroaniline	106-47-8	5	250	500	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	5	50.0	99.9	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	5	250	500	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	5	50.0	99.9	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	5	250	500	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	5	250	500	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	5	250	500	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	5	50.0	99.9	ND	ug/kg	U
2-Nitroaniline	88-74-4	5	250	500	ND	ug/kg	U
Acenaphthylene	208-96-8	5	50.0	99.9	ND	ug/kg	U
Dimethylphthalate	131-11-3	5	50.0	99.9	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05RE1 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:25

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 16:40

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	5	250	500	ND	ug/kg	U
Acenaphthene	83-32-9	5	50.0	99.9	50.2	ug/kg	J, D
3-Nitroaniline	99-09-2	5	250	500	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	5	500	999	ND	ug/kg	U
Dibenzofuran	132-64-9	5	99.9	99.9	ND	ug/kg	U
4-Nitrophenol	100-02-7	5	250	500	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	5	250	500	ND	ug/kg	U
Fluorene	86-73-7	5	99.9	99.9	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	5	175	250	ND	ug/kg	U
Diethyl phthalate	84-66-2	5	175	250	ND	ug/kg	U
4-Nitroaniline	100-01-6	5	250	500	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	5	500	999	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	5	50.0	99.9	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	5	99.9	99.9	ND	ug/kg	U
Hexachlorobenzene	118-74-1	5	99.9	99.9	ND	ug/kg	U
Pentachlorophenol	87-86-5	5	250	500	ND	ug/kg	U
Phenanthrene	85-01-8	5	50.0	99.9	106	ug/kg	D
Anthracene	120-12-7	5	50.0	99.9	ND	ug/kg	U
Carbazole	86-74-8	5	50.0	99.9	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	5	50.0	99.9	ND	ug/kg	U
Fluoranthene	206-44-0	5	50.0	99.9	128	ug/kg	Q, D
Pyrene	129-00-0	5	50.0	99.9	181	ug/kg	Q, D
Butylbenzylphthalate	85-68-7	5	50.0	99.9	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	5	50.0	99.9	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	5	250	500	ND	ug/kg	U
Chrysene	218-01-9	5	50.0	99.9	112	ug/kg	D
bis(2-Ethylhexyl)phthalate	117-81-7	5	200	250	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	5	50.0	99.9	ND	ug/kg	U
Benzofluoranthenes, Total		5	150	200	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	5	50.0	99.9	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	5	99.9	99.9	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	99.9	99.9	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	99.9	99.9	ND	ug/kg	U
Pyridine	110-86-1	5	500	500	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	5	50.0	99.9	ND	ug/kg	U
Surrogate: 2-Fluorophenol				*27-120 %*	*64.6*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*64.8*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

SP-1-E

24I0008-05RE1 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 08/28/2024 13:25

Instrument: NT10 Analyst: RJL — Analyzed: 09/17/2024 16:40

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Chlorophenol-d4		*31-120 %*	*72.0*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4		*32-120 %*	*70.2*	*%*	
Surrogate: Nitrobenzene-d5		*30-120 %*	*71.4*	*%*	
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*80.7*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*49.3*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*85.4*	*%*	Q

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0045 - EPA 8260D

Instrument: NT5 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0045-BLK1)				Prepared: 03-Sep-2024 Analyzed: 03-Sep-2024 13:15							
Chloromethane	ND	0.50	1.00	ug/kg							U
Vinyl Chloride	ND	0.50	1.00	ug/kg							U
Bromomethane	ND	2.00	2.00	ug/kg							U
Chloroethane	ND	2.00	2.00	ug/kg							U
Trichlorofluoromethane	ND	1.00	2.00	ug/kg							U
Acrolein	ND	2.50	5.00	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.00	2.00	ug/kg							U
Acetone	ND	10.0	10.0	ug/kg							U
1,1-Dichloroethene	ND	0.50	1.00	ug/kg							U
Iodomethane	ND	1.00	1.00	ug/kg							U
Methylene Chloride	ND	5.00	5.00	ug/kg							U
Acrylonitrile	ND	5.00	5.00	ug/kg							U
Carbon Disulfide	ND	1.00	1.00	ug/kg							U
trans-1,2-Dichloroethene	ND	1.00	1.00	ug/kg							U
Vinyl Acetate	ND	5.00	5.00	ug/kg							U
1,1-Dichloroethane	ND	0.50	1.00	ug/kg							U
2-Butanone	ND	2.50	5.00	ug/kg							U
2,2-Dichloropropane	ND	0.50	1.00	ug/kg							U
cis-1,2-Dichloroethene	ND	0.50	1.00	ug/kg							U
Chloroform	ND	0.50	1.00	ug/kg							U
Bromochloromethane	ND	0.50	1.00	ug/kg							U
1,1,1-Trichloroethane	ND	1.00	1.00	ug/kg							U
1,1-Dichloropropene	ND	0.50	1.00	ug/kg							U
Carbon tetrachloride	ND	0.50	1.00	ug/kg							U
1,2-Dichloroethane	ND	0.50	1.00	ug/kg							U
Benzene	ND	0.50	1.00	ug/kg							U
Trichloroethene	ND	0.50	1.00	ug/kg							U
1,2-Dichloropropane	ND	0.50	1.00	ug/kg							U
Bromodichloromethane	ND	0.50	1.00	ug/kg							U
Dibromomethane	ND	0.50	1.00	ug/kg							U
2-Chloroethyl vinyl ether	ND	5.00	5.00	ug/kg							U
4-Methyl-2-Pentanone	ND	2.50	5.00	ug/kg							U
cis-1,3-Dichloropropene	ND	0.50	1.00	ug/kg							U
Toluene	ND	0.50	1.00	ug/kg							U
trans-1,3-Dichloropropene	ND	0.50	1.00	ug/kg							U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0045 - EPA 8260D

Instrument: NT5 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0045-BLK1)				Prepared: 03-Sep-2024 Analyzed: 03-Sep-2024 13:15							
2-Hexanone	2.62	2.50	5.00	ug/kg							J
1,1,2-Trichloroethane	ND	0.50	1.00	ug/kg							U
1,3-Dichloropropane	ND	0.50	1.00	ug/kg							U
Tetrachloroethene	ND	0.50	1.00	ug/kg							U
Dibromochloromethane	ND	0.50	1.00	ug/kg							U
1,2-Dibromoethane	ND	0.50	1.00	ug/kg							U
Chlorobenzene	ND	0.50	1.00	ug/kg							U
Ethylbenzene	ND	0.50	1.00	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	0.50	1.00	ug/kg							U
m,p-Xylene	ND	1.00	2.00	ug/kg							U
o-Xylene	ND	0.50	1.00	ug/kg							U
Xylenes, total	ND	1.00	2.00	ug/kg							U
Styrene	ND	0.50	1.00	ug/kg							U
Bromoform	ND	0.50	1.00	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	0.50	1.00	ug/kg							U
1,2,3-Trichloropropane	ND	2.00	2.00	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	5.00	5.00	ug/kg							U
n-Propylbenzene	ND	0.50	1.00	ug/kg							U
Bromobenzene	ND	0.50	1.00	ug/kg							U
Isopropyl Benzene	ND	0.50	1.00	ug/kg							U
2-Chlorotoluene	ND	0.50	1.00	ug/kg							U
4-Chlorotoluene	ND	0.50	1.00	ug/kg							U
t-Butylbenzene	ND	0.50	1.00	ug/kg							U
1,3,5-Trimethylbenzene	ND	0.50	1.00	ug/kg							U
1,2,4-Trimethylbenzene	ND	0.50	1.00	ug/kg							U
s-Butylbenzene	ND	0.50	1.00	ug/kg							U
4-Isopropyl Toluene	ND	0.50	1.00	ug/kg							U
1,3-Dichlorobenzene	ND	0.50	1.00	ug/kg							U
1,4-Dichlorobenzene	ND	0.50	1.00	ug/kg							U
n-Butylbenzene	ND	0.50	1.00	ug/kg							U
1,2-Dichlorobenzene	ND	1.00	1.00	ug/kg							U
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/kg							U
1,2,4-Trichlorobenzene	ND	2.50	5.00	ug/kg							U
Hexachloro-1,3-Butadiene	ND	5.00	5.00	ug/kg							U
Naphthalene	ND	2.50	5.00	ug/kg							U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0045 - EPA 8260D

Instrument: NT5 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0045-BLK1)				Prepared: 03-Sep-2024 Analyzed: 03-Sep-2024 13:15							
1,2,3-Trichlorobenzene	ND	2.50	5.00	ug/kg							U
Dichlorodifluoromethane	ND	0.50	1.00	ug/kg							U
Methyl tert-butyl Ether	ND	0.50	1.00	ug/kg							U
2-Pentanone	ND	2.50	5.00	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	48.9			ug/kg	*50.0*		*97.9*	*80-149*			
Surrogate: Toluene-d8	47.2			ug/kg	*50.0*		*94.4*	*77-120*			
Surrogate: 4-Bromofluorobenzene	50.4			ug/kg	*50.0*		*101*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	49.9			ug/kg	*50.0*		*99.8*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0045 - EPA 8260D

Instrument: NT5 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0045-BS1)					Prepared: 03-Sep-2024 Analyzed: 03-Sep-2024 12:25						
Chloromethane	53.0	0.50	1.00	ug/kg	50.0		106	64-132			
Vinyl Chloride	55.9	0.50	1.00	ug/kg	50.0		112	74-135			
Bromomethane	51.8	2.00	2.00	ug/kg	50.0		104	53-144			
Chloroethane	58.0	2.00	2.00	ug/kg	50.0		116	55-149			
Trichlorofluoromethane	55.1	1.00	2.00	ug/kg	50.0		110	61-164			
Acrolein	253	2.50	5.00	ug/kg	250		101	59-140			
1,1,2-Trichloro-1,2,2-Trifluoroethane	53.4	1.00	2.00	ug/kg	50.0		107	74-143			
Acetone	254	10.0	10.0	ug/kg	250		102	48-137			
1,1-Dichloroethene	53.3	0.50	1.00	ug/kg	50.0		107	77-134			
Iodomethane	59.1	1.00	1.00	ug/kg	50.0		118	31-162			
Methylene Chloride	46.4	5.00	5.00	ug/kg	50.0		92.7	69-129			
Acrylonitrile	51.2	5.00	5.00	ug/kg	50.0		102	69-134			
Carbon Disulfide	55.2	1.00	1.00	ug/kg	50.0		110	71-137			
trans-1,2-Dichloroethene	52.7	1.00	1.00	ug/kg	50.0		105	79-130			
Vinyl Acetate	50.2	5.00	5.00	ug/kg	50.0		100	66-141			
1,1-Dichloroethane	52.3	0.50	1.00	ug/kg	50.0		105	80-126			
2-Butanone	272	2.50	5.00	ug/kg	250		109	70-132			
2,2-Dichloropropane	53.6	0.50	1.00	ug/kg	50.0		107	77-138			
cis-1,2-Dichloroethene	51.7	0.50	1.00	ug/kg	50.0		103	80-125			
Chloroform	51.6	0.50	1.00	ug/kg	50.0		103	80-126			
Bromochloromethane	53.9	0.50	1.00	ug/kg	50.0		108	80-129			
1,1,1-Trichloroethane	52.6	1.00	1.00	ug/kg	50.0		105	78-133			
1,1-Dichloropropene	52.1	0.50	1.00	ug/kg	50.0		104	63-145			
Carbon tetrachloride	51.9	0.50	1.00	ug/kg	50.0		104	71-129			
1,2-Dichloroethane	50.4	0.50	1.00	ug/kg	50.0		101	76-120			
Benzene	50.2	0.50	1.00	ug/kg	50.0		100	80-120			
Trichloroethene	51.9	0.50	1.00	ug/kg	50.0		104	80-120			
1,2-Dichloropropane	50.8	0.50	1.00	ug/kg	50.0		102	79-120			
Bromodichloromethane	51.2	0.50	1.00	ug/kg	50.0		102	80-122			
Dibromomethane	50.2	0.50	1.00	ug/kg	50.0		100	80-120			
2-Chloroethyl vinyl ether	50.0	5.00	5.00	ug/kg	50.0		100	51-129			
4-Methyl-2-Pentanone	259	2.50	5.00	ug/kg	250		104	73-121			
cis-1,3-Dichloropropene	51.8	0.50	1.00	ug/kg	50.0		104	80-120			
Toluene	49.6	0.50	1.00	ug/kg	50.0		99.3	75-120			
trans-1,3-Dichloropropene	51.6	0.50	1.00	ug/kg	50.0		103	80-124			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0045 - EPA 8260D

Instrument: NT5 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0045-BS1)					Prepared: 03-Sep-2024 Analyzed: 03-Sep-2024 12:25						
2-Hexanone	263	2.50	5.00	ug/kg	250		105	68-122			
1,1,2-Trichloroethane	51.1	0.50	1.00	ug/kg	50.0		102	79-120			
1,3-Dichloropropane	51.4	0.50	1.00	ug/kg	50.0		103	78-120			
Tetrachloroethene	52.6	0.50	1.00	ug/kg	50.0		105	74-124			
Dibromochloromethane	50.9	0.50	1.00	ug/kg	50.0		102	74-125			
1,2-Dibromoethane	51.1	0.50	1.00	ug/kg	50.0		102	80-120			
Chlorobenzene	51.1	0.50	1.00	ug/kg	50.0		102	78-120			
Ethylbenzene	51.7	0.50	1.00	ug/kg	50.0		103	80-125			
1,1,1,2-Tetrachloroethane	51.6	0.50	1.00	ug/kg	50.0		103	80-120			
m,p-Xylene	104	1.00	2.00	ug/kg	100		104	76-121			
o-Xylene	52.0	0.50	1.00	ug/kg	50.0		104	67-132			
Xylenes, total	156	1.00	2.00	ug/kg	150		104	67-132			
Styrene	53.0	0.50	1.00	ug/kg	50.0		106	80-120			
Bromoform	49.9	0.50	1.00	ug/kg	50.0		99.8	64-128			
1,1,2,2-Tetrachloroethane	50.5	0.50	1.00	ug/kg	50.0		101	74-120			
1,2,3-Trichloropropane	49.6	2.00	2.00	ug/kg	50.0		99.1	73-120			
trans-1,4-Dichloro 2-Butene	52.4	5.00	5.00	ug/kg	50.0		105	65-125			
n-Propylbenzene	51.8	0.50	1.00	ug/kg	50.0		104	72-124			
Bromobenzene	50.1	0.50	1.00	ug/kg	50.0		100	76-120			
Isopropyl Benzene	51.9	0.50	1.00	ug/kg	50.0		104	74-121			
2-Chlorotoluene	50.4	0.50	1.00	ug/kg	50.0		101	75-120			
4-Chlorotoluene	51.8	0.50	1.00	ug/kg	50.0		104	69-124			
t-Butylbenzene	50.6	0.50	1.00	ug/kg	50.0		101	72-122			
1,3,5-Trimethylbenzene	51.8	0.50	1.00	ug/kg	50.0		104	74-122			
1,2,4-Trimethylbenzene	52.1	0.50	1.00	ug/kg	50.0		104	75-121			
s-Butylbenzene	51.3	0.50	1.00	ug/kg	50.0		103	70-128			
4-Isopropyl Toluene	52.0	0.50	1.00	ug/kg	50.0		104	75-125			
1,3-Dichlorobenzene	51.2	0.50	1.00	ug/kg	50.0		102	75-120			
1,4-Dichlorobenzene	50.9	0.50	1.00	ug/kg	50.0		102	73-120			
n-Butylbenzene	53.0	0.50	1.00	ug/kg	50.0		106	73-130			
1,2-Dichlorobenzene	50.5	1.00	1.00	ug/kg	50.0		101	76-120			
1,2-Dibromo-3-chloropropane	51.7	2.50	5.00	ug/kg	50.0		103	72-136			
1,2,4-Trichlorobenzene	55.3	2.50	5.00	ug/kg	50.0		111	66-140			
Hexachloro-1,3-Butadiene	51.2	5.00	5.00	ug/kg	50.0		102	67-133			
Naphthalene	53.3	2.50	5.00	ug/kg	50.0		107	69-125			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0045 - EPA 8260D

Instrument: NT5 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0045-BS1)				Prepared: 03-Sep-2024 Analyzed: 03-Sep-2024 12:25							
1,2,3-Trichlorobenzene	54.0	2.50	5.00	ug/kg	50.0		108	68-132			
Dichlorodifluoromethane	56.5	0.50	1.00	ug/kg	50.0		113	67-142			
Methyl tert-butyl Ether	51.1	0.50	1.00	ug/kg	50.0		102	79-127			
2-Pentanone	266	2.50	5.00	ug/kg	250		106	77-120			
Surrogate: 1,2-Dichloroethane-d4	51.4			ug/kg	*50.0*		*103*	*80-149*			
Surrogate: Toluene-d8	50.3			ug/kg	*50.0*		*101*	*77-120*			
Surrogate: 4-Bromofluorobenzene	50.4			ug/kg	*50.0*		*101*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.5			ug/kg	*50.0*		*101*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0045 - EPA 8260D

Instrument: NT5 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0045-BSD1)					Prepared: 03-Sep-2024 Analyzed: 03-Sep-2024 12:50						
Chloromethane	51.2	0.50	1.00	ug/kg	50.0		102	64-132	3.46	30	
Vinyl Chloride	54.2	0.50	1.00	ug/kg	50.0		108	74-135	3.12	30	
Bromomethane	50.4	2.00	2.00	ug/kg	50.0		101	53-144	2.74	30	
Chloroethane	55.9	2.00	2.00	ug/kg	50.0		112	55-149	3.61	30	
Trichlorofluoromethane	53.0	1.00	2.00	ug/kg	50.0		106	61-164	3.77	30	
Acrolein	244	2.50	5.00	ug/kg	250		97.8	59-140	3.53	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	52.0	1.00	2.00	ug/kg	50.0		104	74-143	2.58	30	
Acetone	244	10.0	10.0	ug/kg	250		97.7	48-137	3.91	30	
1,1-Dichloroethene	50.9	0.50	1.00	ug/kg	50.0		102	77-134	4.65	30	
Iodomethane	56.0	1.00	1.00	ug/kg	50.0		112	31-162	5.30	30	
Methylene Chloride	49.3	5.00	5.00	ug/kg	50.0		98.5	69-129	6.07	30	
Acrylonitrile	50.2	5.00	5.00	ug/kg	50.0		100	69-134	1.98	30	
Carbon Disulfide	52.9	1.00	1.00	ug/kg	50.0		106	71-137	4.10	30	
trans-1,2-Dichloroethene	51.0	1.00	1.00	ug/kg	50.0		102	79-130	3.26	30	
Vinyl Acetate	50.5	5.00	5.00	ug/kg	50.0		101	66-141	0.54	30	
1,1-Dichloroethane	51.7	0.50	1.00	ug/kg	50.0		103	80-126	1.16	30	
2-Butanone	261	2.50	5.00	ug/kg	250		104	70-132	4.48	30	
2,2-Dichloropropane	52.7	0.50	1.00	ug/kg	50.0		105	77-138	1.61	30	
cis-1,2-Dichloroethene	50.5	0.50	1.00	ug/kg	50.0		101	80-125	2.30	30	
Chloroform	50.8	0.50	1.00	ug/kg	50.0		102	80-126	1.51	30	
Bromochloromethane	53.6	0.50	1.00	ug/kg	50.0		107	80-129	0.55	30	
1,1,1-Trichloroethane	51.5	1.00	1.00	ug/kg	50.0		103	78-133	2.13	30	
1,1-Dichloropropene	50.7	0.50	1.00	ug/kg	50.0		101	63-145	2.73	30	
Carbon tetrachloride	50.3	0.50	1.00	ug/kg	50.0		101	71-129	3.01	30	
1,2-Dichloroethane	49.9	0.50	1.00	ug/kg	50.0		99.7	76-120	1.12	30	
Benzene	50.3	0.50	1.00	ug/kg	50.0		101	80-120	0.35	30	
Trichloroethene	50.3	0.50	1.00	ug/kg	50.0		101	80-120	3.06	30	
1,2-Dichloropropane	50.9	0.50	1.00	ug/kg	50.0		102	79-120	0.20	30	
Bromodichloromethane	50.3	0.50	1.00	ug/kg	50.0		101	80-122	1.81	30	
Dibromomethane	50.9	0.50	1.00	ug/kg	50.0		102	80-120	1.31	30	
2-Chloroethyl vinyl ether	52.3	5.00	5.00	ug/kg	50.0		105	51-129	4.36	30	
4-Methyl-2-Pentanone	255	2.50	5.00	ug/kg	250		102	73-121	1.61	30	
cis-1,3-Dichloropropene	51.1	0.50	1.00	ug/kg	50.0		102	80-120	1.39	30	
Toluene	48.5	0.50	1.00	ug/kg	50.0		97.0	75-120	2.28	30	
trans-1,3-Dichloropropene	51.0	0.50	1.00	ug/kg	50.0		102	80-124	1.09	30	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0045 - EPA 8260D

Instrument: NT5 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0045-BSD1)					Prepared: 03-Sep-2024 Analyzed: 03-Sep-2024 12:50						
2-Hexanone	255	2.50	5.00	ug/kg	250		102	68-122	3.09	30	
1,1,2-Trichloroethane	49.7	0.50	1.00	ug/kg	50.0		99.5	79-120	2.64	30	
1,3-Dichloropropane	49.9	0.50	1.00	ug/kg	50.0		99.9	78-120	2.84	30	
Tetrachloroethene	50.3	0.50	1.00	ug/kg	50.0		101	74-124	4.57	30	
Dibromochloromethane	50.0	0.50	1.00	ug/kg	50.0		100	74-125	1.77	30	
1,2-Dibromoethane	50.0	0.50	1.00	ug/kg	50.0		100	80-120	2.20	30	
Chlorobenzene	49.4	0.50	1.00	ug/kg	50.0		98.9	78-120	3.41	30	
Ethylbenzene	49.8	0.50	1.00	ug/kg	50.0		99.6	80-125	3.71	30	
1,1,1,2-Tetrachloroethane	50.4	0.50	1.00	ug/kg	50.0		101	80-120	2.30	30	
m,p-Xylene	100	1.00	2.00	ug/kg	100		100	76-121	3.95	30	
o-Xylene	49.9	0.50	1.00	ug/kg	50.0		99.8	67-132	4.18	30	
Xylenes, total	150	1.00	2.00	ug/kg	150		99.9	67-132	4.03	30	
Styrene	50.5	0.50	1.00	ug/kg	50.0		101	80-120	4.84	30	
Bromoform	49.6	0.50	1.00	ug/kg	50.0		99.2	64-128	0.68	30	
1,1,2,2-Tetrachloroethane	49.3	0.50	1.00	ug/kg	50.0		98.7	74-120	2.39	30	
1,2,3-Trichloropropane	49.0	2.00	2.00	ug/kg	50.0		97.9	73-120	1.23	30	
trans-1,4-Dichloro 2-Butene	50.3	5.00	5.00	ug/kg	50.0		101	65-125	4.09	30	
n-Propylbenzene	49.9	0.50	1.00	ug/kg	50.0		99.8	72-124	3.83	30	
Bromobenzene	49.1	0.50	1.00	ug/kg	50.0		98.3	76-120	1.93	30	
Isopropyl Benzene	50.1	0.50	1.00	ug/kg	50.0		100	74-121	3.47	30	
2-Chlorotoluene	48.7	0.50	1.00	ug/kg	50.0		97.4	75-120	3.38	30	
4-Chlorotoluene	50.3	0.50	1.00	ug/kg	50.0		101	69-124	2.88	30	
t-Butylbenzene	49.1	0.50	1.00	ug/kg	50.0		98.3	72-122	2.91	30	
1,3,5-Trimethylbenzene	49.9	0.50	1.00	ug/kg	50.0		99.7	74-122	3.81	30	
1,2,4-Trimethylbenzene	50.4	0.50	1.00	ug/kg	50.0		101	75-121	3.32	30	
s-Butylbenzene	49.5	0.50	1.00	ug/kg	50.0		99.0	70-128	3.50	30	
4-Isopropyl Toluene	50.5	0.50	1.00	ug/kg	50.0		101	75-125	2.85	30	
1,3-Dichlorobenzene	49.6	0.50	1.00	ug/kg	50.0		99.1	75-120	3.27	30	
1,4-Dichlorobenzene	49.1	0.50	1.00	ug/kg	50.0		98.2	73-120	3.52	30	
n-Butylbenzene	50.5	0.50	1.00	ug/kg	50.0		101	73-130	4.80	30	
1,2-Dichlorobenzene	49.1	1.00	1.00	ug/kg	50.0		98.2	76-120	2.79	30	
1,2-Dibromo-3-chloropropane	51.1	2.50	5.00	ug/kg	50.0		102	72-136	1.17	30	
1,2,4-Trichlorobenzene	52.8	2.50	5.00	ug/kg	50.0		106	66-140	4.74	30	
Hexachloro-1,3-Butadiene	49.3	5.00	5.00	ug/kg	50.0		98.6	67-133	3.87	30	
Naphthalene	52.0	2.50	5.00	ug/kg	50.0		104	69-125	2.55	30	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0045 - EPA 8260D

Instrument: NT5 Analyst: PKC

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0045-BSD1)				Prepared: 03-Sep-2024 Analyzed: 03-Sep-2024 12:50							
1,2,3-Trichlorobenzene	51.8	2.50	5.00	ug/kg	50.0		104	68-132	4.18	30	
Dichlorodifluoromethane	54.1	0.50	1.00	ug/kg	50.0		108	67-142	4.41	30	
Methyl tert-butyl Ether	51.1	0.50	1.00	ug/kg	50.0		102	79-127	0.06	30	
2-Pentanone	261	2.50	5.00	ug/kg	250		105	77-120	1.72	30	
Surrogate: 1,2-Dichloroethane-d4	51.6			ug/kg	*50.0*		*103*	*80-149*			
Surrogate: Toluene-d8	51.0			ug/kg	*50.0*		*102*	*77-120*			
Surrogate: 4-Bromofluorobenzene	50.3			ug/kg	*50.0*		*101*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.3			ug/kg	*50.0*		*101*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Volatile Organic Compounds - Quality Control

Batch BMI0068 - NWTPHg

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0068-BLK1)			Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 10:59							
Gasoline Range Organics (Tol-Nap)	ND	5000	ug/kg							U
Surrogate: Toluene-d8	4.90		ug/kg	*5.00*		*97.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.71		ug/kg	*5.00*		*94.2*	*78-123*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0068 - NWTPHg

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0068-BS1)				Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 09:09						
Gasoline Range Organics (Tol-Nap)	41600	5000	ug/kg	50000		83.1	70-121			
Surrogate: Toluene-d8	5.00		ug/kg	*5.00*		*99.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.99		ug/kg	*5.00*		*99.9*	*78-123*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMI0068 - NWTPHg

Instrument: NT3 Analyst: LN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0068-BSD1)				Prepared: 04-Sep-2024 Analyzed: 04-Sep-2024 09:53						
Gasoline Range Organics (Tol-Nap)	42300	5000	ug/kg	50000		84.6	70-121	1.71	30	
Surrogate: Toluene-d8	5.07		ug/kg	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.71		ug/kg	*5.00*		*94.1*	*78-123*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0092-BLK1)	Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 20:36										
Phenol	ND	10.0	20.0	ug/kg							U
bis(2-chloroethyl) ether	ND	35.0	50.0	ug/kg							U
2-Chlorophenol	ND	20.0	20.0	ug/kg							U
1,3-Dichlorobenzene	ND	10.0	20.0	ug/kg							U
1,4-Dichlorobenzene	ND	10.0	20.0	ug/kg							U
1,2-Dichlorobenzene	ND	10.0	20.0	ug/kg							U
Benzyl Alcohol	ND	20.0	20.0	ug/kg							U
2,2'-Oxybis(1-chloropropane)	ND	10.0	20.0	ug/kg							U
2-Methylphenol	ND	10.0	20.0	ug/kg							U
Hexachloroethane	ND	10.0	20.0	ug/kg							U
N-Nitroso-di-n-Propylamine	ND	15.0	20.0	ug/kg							U
4-Methylphenol	ND	15.0	20.0	ug/kg							U
Nitrobenzene	ND	10.0	20.0	ug/kg							U
Isophorone	ND	15.0	20.0	ug/kg							U
2-Nitrophenol	ND	10.0	20.0	ug/kg							U
2,4-Dimethylphenol	ND	50.0	100	ug/kg							U
Bis(2-Chloroethoxy)methane	ND	10.0	20.0	ug/kg							U
2,4-Dichlorophenol	ND	50.0	100	ug/kg							U
1,2,4-Trichlorobenzene	ND	10.0	20.0	ug/kg							U
Naphthalene	ND	10.0	20.0	ug/kg							U
Benzoic acid	ND	100	200	ug/kg							U
4-Chloroaniline	ND	50.0	100	ug/kg							U
Hexachlorobutadiene	ND	10.0	20.0	ug/kg							U
4-Chloro-3-Methylphenol	ND	50.0	100	ug/kg							U
2-Methylnaphthalene	ND	10.0	20.0	ug/kg							U
Hexachlorocyclopentadiene	ND	50.0	100	ug/kg							U
2,4,6-Trichlorophenol	ND	50.0	100	ug/kg							U
2,4,5-Trichlorophenol	ND	50.0	100	ug/kg							U
2-Chloronaphthalene	ND	10.0	20.0	ug/kg							U
2-Nitroaniline	ND	50.0	100	ug/kg							U
Acenaphthylene	ND	10.0	20.0	ug/kg							U
Dimethylphthalate	ND	10.0	20.0	ug/kg							U
2,6-Dinitrotoluene	ND	50.0	100	ug/kg							U
Acenaphthene	ND	10.0	20.0	ug/kg							U
3-Nitroaniline	ND	50.0	100	ug/kg							U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0092-BLK1)				Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 20:36							
2,4-Dinitrophenol	ND	100	200	ug/kg							U
Dibenzofuran	ND	20.0	20.0	ug/kg							U
4-Nitrophenol	ND	50.0	100	ug/kg							U
2,4-Dinitrotoluene	ND	50.0	100	ug/kg							U
Fluorene	ND	20.0	20.0	ug/kg							U
4-Chlorophenylphenyl ether	ND	35.0	50.0	ug/kg							U
Diethyl phthalate	ND	35.0	50.0	ug/kg							U
4-Nitroaniline	ND	50.0	100	ug/kg							U
4,6-Dinitro-2-methylphenol	ND	100	200	ug/kg							U
N-Nitrosodiphenylamine	ND	10.0	20.0	ug/kg							U
4-Bromophenyl phenyl ether	ND	20.0	20.0	ug/kg							U
Hexachlorobenzene	ND	20.0	20.0	ug/kg							U
Pentachlorophenol	ND	50.0	100	ug/kg							U
Phenanthrene	ND	10.0	20.0	ug/kg							U
Anthracene	ND	10.0	20.0	ug/kg							U
Carbazole	ND	10.0	20.0	ug/kg							U
Di-n-Butylphthalate	ND	10.0	20.0	ug/kg							U
Fluoranthene	ND	10.0	20.0	ug/kg							U
Pyrene	ND	10.0	20.0	ug/kg							U
Butylbenzylphthalate	ND	10.0	20.0	ug/kg							U
Benzo(a)anthracene	ND	10.0	20.0	ug/kg							U
3,3'-Dichlorobenzidine	ND	50.0	100	ug/kg							U
Chrysene	ND	10.0	20.0	ug/kg							U
bis(2-Ethylhexyl)phthalate	ND	40.0	50.0	ug/kg							U
Di-n-Octylphthalate	ND	10.0	20.0	ug/kg							U
Benzofluoranthenes, Total	ND	30.0	40.0	ug/kg							U
Benzo(a)pyrene	ND	10.0	20.0	ug/kg							U
Indeno(1,2,3-cd)pyrene	ND	20.0	20.0	ug/kg							U
Dibenzo(a,h)anthracene	ND	20.0	20.0	ug/kg							U
Benzo(g,h,i)perylene	ND	20.0	20.0	ug/kg							U
Pyridine	ND	100	100	ug/kg							U
1-Methylnaphthalene	ND	10.0	20.0	ug/kg							U
Surrogate: 2-Fluorophenol	446			ug/kg	*750*		*59.5*	*27-120*			
Surrogate: Phenol-d5	463			ug/kg	*750*		*61.7*	*29-120*			
Surrogate: 2-Chlorophenol-d4	500			ug/kg	*750*		*66.7*	*31-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0092-BLK1)				Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 20:36							
Surrogate: 1,2-Dichlorobenzene-d4	339			ug/kg	*500*		*67.9*	*32-120*			
Surrogate: Nitrobenzene-d5	355			ug/kg	*500*		*71.0*	*30-120*			
Surrogate: 2-Fluorobiphenyl	347			ug/kg	*500*		*69.5*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	379			ug/kg	*750*		*50.5*	*24-134*			
Surrogate: p-Terphenyl-d14	420			ug/kg	*500*		*84.1*	*37-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0092-BS1)				Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 21:15							
Phenol	310	10.0	20.0	ug/kg	500		62.1	31-120			
bis(2-chloroethyl) ether	399	35.0	50.0	ug/kg	500		79.8	36-120			
2-Chlorophenol	322	20.0	20.0	ug/kg	500		64.5	39-120			
1,3-Dichlorobenzene	349	10.0	20.0	ug/kg	500		69.8	40-120			
1,4-Dichlorobenzene	438	10.0	20.0	ug/kg	500		87.6	39-120			
1,2-Dichlorobenzene	363	10.0	20.0	ug/kg	500		72.6	40-120			
Benzyl Alcohol	388	20.0	20.0	ug/kg	500		77.5	19-120			
2,2'-Oxybis(1-chloropropane)	435	10.0	20.0	ug/kg	500		87.0	32-120			
2-Methylphenol	354	10.0	20.0	ug/kg	500		70.8	11-120			
Hexachloroethane	379	10.0	20.0	ug/kg	500		75.8	38-120			
N-Nitroso-di-n-Propylamine	388	15.0	20.0	ug/kg	500		77.6	24-120			
4-Methylphenol	368	15.0	20.0	ug/kg	500		73.6	29-120			
Nitrobenzene	393	10.0	20.0	ug/kg	500		78.5	36-120			
Isophorone	528	15.0	20.0	ug/kg	500		106	37-126			
2-Nitrophenol	235	10.0	20.0	ug/kg	500		47.0	30-120			Q
2,4-Dimethylphenol	653	50.0	100	ug/kg	1500		43.6	10-120			
Bis(2-Chloroethoxy)methane	423	10.0	20.0	ug/kg	500		84.5	39-126			
2,4-Dichlorophenol	1180	50.0	100	ug/kg	1500		78.4	28-120			
1,2,4-Trichlorobenzene	359	10.0	20.0	ug/kg	500		71.8	35-120			
Naphthalene	364	10.0	20.0	ug/kg	500		72.7	41-120			
Benzoic acid	870	100	200	ug/kg	2250		38.7	10-120			Q
4-Chloroaniline	369	50.0	100	ug/kg	1500		24.6	10-120			Q
Hexachlorobutadiene	377	10.0	20.0	ug/kg	500		75.4	37-120			
4-Chloro-3-Methylphenol	1100	50.0	100	ug/kg	1500		73.4	32-120			
2-Methylnaphthalene	406	10.0	20.0	ug/kg	500		81.2	43-120			
Hexachlorocyclopentadiene	747	50.0	100	ug/kg	1500		49.8	10-120			Q
2,4,6-Trichlorophenol	1040	50.0	100	ug/kg	1500		69.5	40-120			
2,4,5-Trichlorophenol	1100	50.0	100	ug/kg	1500		73.4	51.5-129			
2-Chloronaphthalene	354	10.0	20.0	ug/kg	500		70.8	40-120			
2-Nitroaniline	1180	50.0	100	ug/kg	1500		78.5	40-152			
Acenaphthylene	164	10.0	20.0	ug/kg	500		32.9	42-120			*, Q
Dimethylphthalate	435	10.0	20.0	ug/kg	500		87.1	43-120			
2,6-Dinitrotoluene	1410	50.0	100	ug/kg	1500		93.9	31-156			
Acenaphthene	373	10.0	20.0	ug/kg	500		74.6	45-120			
3-Nitroaniline	336	50.0	100	ug/kg	1500		22.4	22-120			Q

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0092-BS1)				Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 21:15							
2,4-Dinitrophenol	1470	100	200	ug/kg	2750		53.6	13-160			Q
Dibenzofuran	378	20.0	20.0	ug/kg	500		75.6	43-120			
4-Nitrophenol	925	50.0	100	ug/kg	1500		61.7	18-154			
2,4-Dinitrotoluene	1200	50.0	100	ug/kg	1500		79.7	44-150			
Fluorene	371	20.0	20.0	ug/kg	500		74.2	40-120			
4-Chlorophenylphenyl ether	393	35.0	50.0	ug/kg	500		78.7	36-141			
Diethyl phthalate	468	35.0	50.0	ug/kg	500		93.6	43-140			
4-Nitroaniline	581	50.0	100	ug/kg	1500		38.8	15-120			
4,6-Dinitro-2-methylphenol	1930	100	200	ug/kg	2750		70.3	33-144			Q
N-Nitrosodiphenylamine	272	10.0	20.0	ug/kg	500		54.4	17-120			
4-Bromophenyl phenyl ether	432	20.0	20.0	ug/kg	500		86.3	39-120			
Hexachlorobenzene	448	20.0	20.0	ug/kg	500		89.5	33-120			
Pentachlorophenol	897	50.0	100	ug/kg	1500		59.8	33-133			
Phenanthrene	366	10.0	20.0	ug/kg	500		73.2	49-120			
Anthracene	350	10.0	20.0	ug/kg	500		70.1	37-120			
Carbazole	224	10.0	20.0	ug/kg	500		44.8	30-135			
Di-n-Butylphthalate	468	10.0	20.0	ug/kg	500		93.6	48-126			
Fluoranthene	351	10.0	20.0	ug/kg	500		70.3	38-127			
Pyrene	346	10.0	20.0	ug/kg	500		69.2	39-122			
Butylbenzylphthalate	408	10.0	20.0	ug/kg	500		81.5	45-132			
Benzo(a)anthracene	398	10.0	20.0	ug/kg	500		79.7	44-120			
3,3'-Dichlorobenzidine	131	50.0	100	ug/kg	1000		13.1	10-120			Q
Chrysene	382	10.0	20.0	ug/kg	500		76.4	47-120			
bis(2-Ethylhexyl)phthalate	434	40.0	50.0	ug/kg	500		86.8	10-130			
Di-n-Octylphthalate	383	10.0	20.0	ug/kg	500		76.6	10-124			
Benzofluoranthenes, Total	896	30.0	40.0	ug/kg	1000		89.6	30-160			
Benzo(a)pyrene	390	10.0	20.0	ug/kg	500		78.0	37-120			
Indeno(1,2,3-cd)pyrene	362	20.0	20.0	ug/kg	500		72.3	30-160			Q
Dibenzo(a,h)anthracene	357	20.0	20.0	ug/kg	500		71.3	30-160			Q
Benzo(g,h,i)perylene	328	20.0	20.0	ug/kg	500		65.6	10-150			Q
Pyridine	270	100	100	ug/kg	1500		18.0	10-147			
1-Methylnaphthalene	419	10.0	20.0	ug/kg	500		83.8	42-120			
Surrogate: 2-Fluorophenol	511			ug/kg	*750*		*68.2*	*27-120*			
Surrogate: Phenol-d5	519			ug/kg	*750*		*69.2*	*29-120*			
Surrogate: 2-Chlorophenol-d4	547			ug/kg	*750*		*73.0*	*31-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0092-BS1)				Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 21:15							
Surrogate: 1,2-Dichlorobenzene-d4	364			ug/kg	*500*		*72.8*	*32-120*			
Surrogate: Nitrobenzene-d5	396			ug/kg	*500*		*79.2*	*30-120*			
Surrogate: 2-Fluorobiphenyl	369			ug/kg	*500*		*73.8*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	640			ug/kg	*750*		*85.3*	*24-134*			
Surrogate: p-Terphenyl-d14	396			ug/kg	*500*		*79.2*	*37-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0092-BSD1)				Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 21:54							
Phenol	341	10.0	20.0	ug/kg	500		68.1	31-120	9.27	30	
bis(2-chloroethyl) ether	423	35.0	50.0	ug/kg	500		84.6	36-120	5.93	30	
2-Chlorophenol	373	20.0	20.0	ug/kg	500		74.6	39-120	14.50	30	
1,3-Dichlorobenzene	362	10.0	20.0	ug/kg	500		72.5	40-120	3.73	30	
1,4-Dichlorobenzene	452	10.0	20.0	ug/kg	500		90.4	39-120	3.16	30	
1,2-Dichlorobenzene	368	10.0	20.0	ug/kg	500		73.7	40-120	1.49	30	
Benzyl Alcohol	423	20.0	20.0	ug/kg	500		84.6	19-120	8.72	30	
2,2'-Oxybis(1-chloropropane)	446	10.0	20.0	ug/kg	500		89.2	32-120	2.56	30	
2-Methylphenol	381	10.0	20.0	ug/kg	500		76.1	11-120	7.19	30	
Hexachloroethane	400	10.0	20.0	ug/kg	500		79.9	38-120	5.22	30	
N-Nitroso-di-n-Propylamine	417	15.0	20.0	ug/kg	500		83.4	24-120	7.26	30	
4-Methylphenol	392	15.0	20.0	ug/kg	500		78.3	29-120	6.31	30	
Nitrobenzene	415	10.0	20.0	ug/kg	500		83.0	36-120	5.55	30	
Isophorone	565	15.0	20.0	ug/kg	500		113	37-126	6.77	30	
2-Nitrophenol	258	10.0	20.0	ug/kg	500		51.6	30-120	9.29	30	Q
2,4-Dimethylphenol	651	50.0	100	ug/kg	1500		43.4	10-120	0.33	30	
Bis(2-Chloroethoxy)methane	446	10.0	20.0	ug/kg	500		89.2	39-126	5.36	30	
2,4-Dichlorophenol	1270	50.0	100	ug/kg	1500		84.8	28-120	7.85	30	
1,2,4-Trichlorobenzene	368	10.0	20.0	ug/kg	500		73.5	35-120	2.36	30	
Naphthalene	376	10.0	20.0	ug/kg	500		75.3	41-120	3.48	30	
Benzoic acid	1130	100	200	ug/kg	2250		50.4	10-120	26.30	30	Q
4-Chloroaniline	291	50.0	100	ug/kg	1500		19.4	10-120	23.70	30	Q
Hexachlorobutadiene	394	10.0	20.0	ug/kg	500		78.8	37-120	4.49	30	
4-Chloro-3-Methylphenol	1160	50.0	100	ug/kg	1500		77.6	32-120	5.57	30	
2-Methylnaphthalene	426	10.0	20.0	ug/kg	500		85.1	43-120	4.74	30	
Hexachlorocyclopentadiene	772	50.0	100	ug/kg	1500		51.5	10-120	3.30	30	Q
2,4,6-Trichlorophenol	1100	50.0	100	ug/kg	1500		73.1	40-120	4.95	30	
2,4,5-Trichlorophenol	1160	50.0	100	ug/kg	1500		77.2	51.5-129	5.09	30	
2-Chloronaphthalene	371	10.0	20.0	ug/kg	500		74.3	40-120	4.72	30	
2-Nitroaniline	1230	50.0	100	ug/kg	1500		82.1	40-152	4.43	30	
Acenaphthylene	216	10.0	20.0	ug/kg	500		43.1	42-120	26.90	30	Q
Dimethylphthalate	456	10.0	20.0	ug/kg	500		91.2	43-120	4.68	30	
2,6-Dinitrotoluene	1470	50.0	100	ug/kg	1500		97.8	31-156	4.08	30	
Acenaphthene	385	10.0	20.0	ug/kg	500		76.9	45-120	3.05	30	
3-Nitroaniline	341	50.0	100	ug/kg	1500		22.7	22-120	1.45	30	Q

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0092-BSD1)				Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 21:54							
2,4-Dinitrophenol	1570	100	200	ug/kg	2750		57.2	13-160	6.53	30	Q
Dibenzofuran	392	20.0	20.0	ug/kg	500		78.5	43-120	3.72	30	
4-Nitrophenol	972	50.0	100	ug/kg	1500		64.8	18-154	4.89	30	
2,4-Dinitrotoluene	1240	50.0	100	ug/kg	1500		83.0	44-150	4.01	30	
Fluorene	389	20.0	20.0	ug/kg	500		77.8	40-120	4.77	30	
4-Chlorophenylphenyl ether	413	35.0	50.0	ug/kg	500		82.6	36-141	4.91	30	
Diethyl phthalate	491	35.0	50.0	ug/kg	500		98.3	43-140	4.83	30	
4-Nitroaniline	581	50.0	100	ug/kg	1500		38.7	15-120	0.02	30	
4,6-Dinitro-2-methylphenol	1970	100	200	ug/kg	2750		71.7	33-144	1.99	30	Q
N-Nitrosodiphenylamine	277	10.0	20.0	ug/kg	500		55.3	17-120	1.65	30	
4-Bromophenyl phenyl ether	447	20.0	20.0	ug/kg	500		89.4	39-120	3.48	30	
Hexachlorobenzene	472	20.0	20.0	ug/kg	500		94.5	33-120	5.40	30	
Pentachlorophenol	985	50.0	100	ug/kg	1500		65.6	33-133	9.30	30	
Phenanthrene	390	10.0	20.0	ug/kg	500		78.0	49-120	6.34	30	
Anthracene	357	10.0	20.0	ug/kg	500		71.5	37-120	1.97	30	
Carbazole	253	10.0	20.0	ug/kg	500		50.6	30-135	12.20	30	
Di-n-Butylphthalate	504	10.0	20.0	ug/kg	500		101	48-126	7.44	30	
Fluoranthene	374	10.0	20.0	ug/kg	500		74.8	38-127	6.21	30	
Pyrene	371	10.0	20.0	ug/kg	500		74.1	39-122	6.88	30	
Butylbenzylphthalate	443	10.0	20.0	ug/kg	500		88.7	45-132	8.36	30	
Benzo(a)anthracene	415	10.0	20.0	ug/kg	500		83.0	44-120	4.11	30	
3,3'-Dichlorobenzidine	118	50.0	100	ug/kg	1000		11.8	10-120	10.60	30	Q
Chrysene	393	10.0	20.0	ug/kg	500		78.6	47-120	2.78	30	
bis(2-Ethylhexyl)phthalate	444	40.0	50.0	ug/kg	500		88.9	10-130	2.42	30	
Di-n-Octylphthalate	386	10.0	20.0	ug/kg	500		77.1	10-124	0.67	30	
Benzofluoranthenes, Total	931	30.0	40.0	ug/kg	1000		93.1	30-160	3.77	30	
Benzo(a)pyrene	385	10.0	20.0	ug/kg	500		77.0	37-120	1.20	30	
Indeno(1,2,3-cd)pyrene	378	20.0	20.0	ug/kg	500		75.7	30-160	4.54	30	Q
Dibenzo(a,h)anthracene	377	20.0	20.0	ug/kg	500		75.3	30-160	5.46	30	Q
Benzo(g,h,i)perylene	346	20.0	20.0	ug/kg	500		69.2	10-150	5.29	30	Q
Pyridine	426	100	100	ug/kg	1500		28.4	10-147	44.80	30	*
1-Methylnaphthalene	442	10.0	20.0	ug/kg	500		88.5	42-120	5.43	30	
Surrogate: 2-Fluorophenol	537			ug/kg	*750*		*71.6*	*27-120*			
Surrogate: Phenol-d5	558			ug/kg	*750*		*74.4*	*29-120*			
Surrogate: 2-Chlorophenol-d4	573			ug/kg	*750*		*76.4*	*31-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0092-BSD1)				Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 21:54							
Surrogate: 1,2-Dichlorobenzene-d4	369			ug/kg	*500*		*73.8*	*32-120*			
Surrogate: Nitrobenzene-d5	412			ug/kg	*500*		*82.4*	*30-120*			
Surrogate: 2-Fluorobiphenyl	377			ug/kg	*500*		*75.5*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	670			ug/kg	*750*		*89.3*	*24-134*			
Surrogate: p-Terphenyl-d14	416			ug/kg	*500*		*83.1*	*37-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMI0092-MS1)	**Source: 24I0008-02**			Prepared: 05-Sep-2024		Analyzed: 16-Sep-2024 23:52					
Phenol	289	10.0	20.0	ug/kg	500	ND	57.9	31-120			
bis(2-chloroethyl) ether	328	35.0	50.0	ug/kg	500	ND	65.6	36-120			
2-Chlorophenol	309	20.0	20.0	ug/kg	500	ND	61.8	39-120			
1,3-Dichlorobenzene	306	10.0	20.0	ug/kg	500	ND	61.2	40-120			
1,4-Dichlorobenzene	389	10.0	20.0	ug/kg	500	ND	77.8	39-120			
1,2-Dichlorobenzene	317	10.0	20.0	ug/kg	500	ND	63.3	40-120			
Benzyl Alcohol	361	20.0	20.0	ug/kg	500	ND	72.3	19-120			
2,2'-Oxybis(1-chloropropane)	398	10.0	20.0	ug/kg	500	ND	79.6	32-120			
2-Methylphenol	343	10.0	20.0	ug/kg	500	ND	68.5	11-120			
Hexachloroethane	362	10.0	20.0	ug/kg	500	ND	72.5	38-120			
N-Nitroso-di-n-Propylamine	385	15.0	20.0	ug/kg	500	ND	77.1	24-120			
4-Methylphenol	359	15.0	20.0	ug/kg	500	ND	71.8	29-120			
Nitrobenzene	333	10.0	20.0	ug/kg	500	ND	66.7	36-120			
Isophorone	487	15.0	20.0	ug/kg	500	ND	97.5	37-126			
2-Nitrophenol	228	10.0	20.0	ug/kg	500	ND	45.7	30-120			Q
2,4-Dimethylphenol	794	50.0	100	ug/kg	1500	ND	52.9	10-120			
Bis(2-Chloroethoxy)methane	374	10.0	20.0	ug/kg	500	ND	74.8	39-126			
2,4-Dichlorophenol	1060	50.0	100	ug/kg	1500	ND	70.6	28-120			
1,2,4-Trichlorobenzene	302	10.0	20.0	ug/kg	500	ND	60.3	35-120			
Naphthalene	389	10.0	20.0	ug/kg	500	64.8	64.9	41-120			
Benzoic acid	877	100	200	ug/kg	2250	ND	39.0	10-120			Q
4-Chloroaniline	73.3	50.0	100	ug/kg	1500	ND	4.9	10-120			*, J
Hexachlorobutadiene	304	10.0	20.0	ug/kg	500	ND	60.7	37-120			
4-Chloro-3-Methylphenol	1050	50.0	100	ug/kg	1500	ND	70.3	32-120			
2-Methylnaphthalene	473	10.0	20.0	ug/kg	500	67.5	81.2	43-120			
Hexachlorocyclopentadiene	404	50.0	100	ug/kg	1500	ND	26.9	10-120			Q
2,4,6-Trichlorophenol	1020	50.0	100	ug/kg	1500	ND	68.2	40-120			
2,4,5-Trichlorophenol	1080	50.0	100	ug/kg	1500	ND	71.8	51.5-129			
2-Chloronaphthalene	343	10.0	20.0	ug/kg	500	ND	68.7	40-120			
2-Nitroaniline	1160	50.0	100	ug/kg	1500	ND	77.1	40-152			
Acenaphthylene	195	10.0	20.0	ug/kg	500	10.5	37.0	42-120			*, Q
Dimethylphthalate	425	10.0	20.0	ug/kg	500	ND	85.1	43-120			
2,6-Dinitrotoluene	1380	50.0	100	ug/kg	1500	ND	92.2	31-156			
Acenaphthene	697	10.0	20.0	ug/kg	500	289	81.7	45-120			
3-Nitroaniline	266	50.0	100	ug/kg	1500	ND	17.7	22-120			*, Q

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMI0092-MS1)	**Source: 24I0008-02**			Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 23:52							
2,4-Dinitrophenol	878	100	200	ug/kg	2750	ND	31.9	13-160			Q
Dibenzofuran	541	20.0	20.0	ug/kg	500	157	76.8	43-120			
4-Nitrophenol	922	50.0	100	ug/kg	1500	ND	61.5	18-154			
2,4-Dinitrotoluene	1140	50.0	100	ug/kg	1500	ND	75.7	44-150			
Fluorene	613	20.0	20.0	ug/kg	500	225	77.6	40-120			
4-Chlorophenylphenyl ether	376	35.0	50.0	ug/kg	500	ND	75.3	36-141			
Diethyl phthalate	490	35.0	50.0	ug/kg	500	ND	98.0	43-140			
4-Nitroaniline	481	50.0	100	ug/kg	1500	ND	32.1	15-120			
4,6-Dinitro-2-methylphenol	1340	100	200	ug/kg	2750	ND	48.7	33-144			Q
N-Nitrosodiphenylamine	282	10.0	20.0	ug/kg	500	ND	56.4	17-120			
4-Bromophenyl phenyl ether	397	20.0	20.0	ug/kg	500	ND	79.5	39-120			
Hexachlorobenzene	393	20.0	20.0	ug/kg	500	ND	78.7	33-120			
Pentachlorophenol	999	50.0	100	ug/kg	1500	ND	66.6	33-133			
Phenanthrene	794	10.0	20.0	ug/kg	500	415	75.7	49-120			
Anthracene	438	10.0	20.0	ug/kg	500	92.2	69.2	37-120			
Carbazole	429	10.0	20.0	ug/kg	500	37.5	78.4	30-135			
Di-n-Butylphthalate	516	10.0	20.0	ug/kg	500	ND	103	48-126			
Fluoranthene	768	10.0	20.0	ug/kg	500	478	58.1	38-127			
Pyrene	655	10.0	20.0	ug/kg	500	330	65.0	39-122			
Butylbenzylphthalate	563	10.0	20.0	ug/kg	500	ND	113	45-132			
Benzo(a)anthracene	427	10.0	20.0	ug/kg	500	73.7	70.8	44-120			
3,3'-Dichlorobenzidine	ND	50.0	100	ug/kg	1000	ND		10-120			*, U
Chrysene	441	10.0	20.0	ug/kg	500	85.7	71.0	47-120			
bis(2-Ethylhexyl)phthalate	444	40.0	50.0	ug/kg	500	ND	88.8	10-130			
Di-n-Octylphthalate	338	10.0	20.0	ug/kg	500	ND	67.6	10-124			
Benzofluoranthenes, Total	937	30.0	40.0	ug/kg	1000	119	81.8	30-160			
Benzo(a)pyrene	403	10.0	20.0	ug/kg	500	48.1	71.0	37-120			
Indeno(1,2,3-cd)pyrene	183	20.0	20.0	ug/kg	500	ND	36.6	30-160			Q
Dibenzo(a,h)anthracene	179	20.0	20.0	ug/kg	500	ND	35.9	30-160			Q
Benzo(g,h,i)perylene	141	20.0	20.0	ug/kg	500	ND	28.2	10-150			Q
Pyridine	165	100	100	ug/kg	1500	ND	11.0	10-147			
1-Methylnaphthalene	465	10.0	20.0	ug/kg	500	46.6	83.6	42-120			
Surrogate: 2-Fluorophenol	434			ug/kg	*750*	*477*	*57.9*	*27-120*			
Surrogate: Phenol-d5	466			ug/kg	*750*	*474*	*62.1*	*29-120*			
Surrogate: 2-Chlorophenol-d4	520			ug/kg	*750*	*538*	*69.4*	*31-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMI0092-MS1)	**Source: 24I0008-02**			Prepared: 05-Sep-2024 Analyzed: 16-Sep-2024 23:52							
Surrogate: 1,2-Dichlorobenzene-d4	307			ug/kg	*500*	*337*	*61.5*	*32-120*			
Surrogate: Nitrobenzene-d5	341			ug/kg	*500*	*363*	*68.3*	*30-120*			
Surrogate: 2-Fluorobiphenyl	338			ug/kg	*500*	*362*	*67.6*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	597			ug/kg	*750*	*696*	*79.6*	*24-134*			
Surrogate: p-Terphenyl-d14	452			ug/kg	*500*	*536*	*90.5*	*37-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMI0092-MSD1)	**Source: 24I0008-02**			Prepared: 05-Sep-2024	Analyzed: 17-Sep-2024 00:31						
Phenol	295	10.0	20.0	ug/kg	500	ND	58.9	31-120	1.72	30	
bis(2-chloroethyl) ether	374	35.0	50.0	ug/kg	500	ND	74.8	36-120	13.20	30	
2-Chlorophenol	347	20.0	20.0	ug/kg	500	ND	69.3	39-120	11.50	30	
1,3-Dichlorobenzene	316	10.0	20.0	ug/kg	500	ND	63.3	40-120	3.27	30	
1,4-Dichlorobenzene	401	10.0	20.0	ug/kg	500	ND	80.2	39-120	3.11	30	
1,2-Dichlorobenzene	326	10.0	20.0	ug/kg	500	ND	65.2	40-120	2.94	30	
Benzyl Alcohol	370	20.0	20.0	ug/kg	500	ND	74.1	19-120	2.44	30	
2,2'-Oxybis(1-chloropropane)	405	10.0	20.0	ug/kg	500	ND	80.9	32-120	1.65	30	
2-Methylphenol	349	10.0	20.0	ug/kg	500	ND	69.8	11-120	1.78	30	
Hexachloroethane	370	10.0	20.0	ug/kg	500	ND	74.0	38-120	1.99	30	
N-Nitroso-di-n-Propylamine	397	15.0	20.0	ug/kg	500	ND	79.5	24-120	3.02	30	
4-Methylphenol	366	15.0	20.0	ug/kg	500	ND	73.1	29-120	1.80	30	
Nitrobenzene	344	10.0	20.0	ug/kg	500	ND	68.9	36-120	3.33	30	
Isophorone	490	15.0	20.0	ug/kg	500	ND	98.1	37-126	0.58	30	
2-Nitrophenol	236	10.0	20.0	ug/kg	500	ND	47.2	30-120	3.37	30	Q
2,4-Dimethylphenol	763	50.0	100	ug/kg	1500	ND	50.9	10-120	3.92	30	
Bis(2-Chloroethoxy)methane	380	10.0	20.0	ug/kg	500	ND	76.1	39-126	1.71	30	
2,4-Dichlorophenol	1100	50.0	100	ug/kg	1500	ND	73.7	28-120	4.27	30	
1,2,4-Trichlorobenzene	310	10.0	20.0	ug/kg	500	ND	62.0	35-120	2.64	30	
Naphthalene	376	10.0	20.0	ug/kg	500	64.8	62.2	41-120	3.54	30	
Benzoic acid	736	100	200	ug/kg	2250	ND	32.7	10-120	17.40	30	Q
4-Chloroaniline	156	50.0	100	ug/kg	1500	ND	10.4	10-120	72.10	30	Q
Hexachlorobutadiene	305	10.0	20.0	ug/kg	500	ND	61.0	37-120	0.44	30	
4-Chloro-3-Methylphenol	1080	50.0	100	ug/kg	1500	ND	71.9	32-120	2.25	30	
2-Methylnaphthalene	422	10.0	20.0	ug/kg	500	67.5	70.8	43-120	11.50	30	
Hexachlorocyclopentadiene	431	50.0	100	ug/kg	1500	ND	28.7	10-120	6.59	30	Q
2,4,6-Trichlorophenol	1020	50.0	100	ug/kg	1500	ND	68.1	40-120	0.23	30	
2,4,5-Trichlorophenol	1080	50.0	100	ug/kg	1500	ND	72.2	51.5-129	0.57	30	
2-Chloronaphthalene	346	10.0	20.0	ug/kg	500	ND	69.2	40-120	0.79	30	
2-Nitroaniline	1170	50.0	100	ug/kg	1500	ND	78.3	40-152	1.55	30	
Acenaphthylene	257	10.0	20.0	ug/kg	500	10.5	49.2	42-120	27.00	30	Q
Dimethylphthalate	430	10.0	20.0	ug/kg	500	ND	85.9	43-120	1.01	30	
2,6-Dinitrotoluene	1410	50.0	100	ug/kg	1500	ND	93.9	31-156	1.83	30	
Acenaphthene	551	10.0	20.0	ug/kg	500	289	52.5	45-120	23.40	30	
3-Nitroaniline	413	50.0	100	ug/kg	1500	ND	27.5	22-120	43.30	30	Q

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMI0092-MSD1)	**Source: 24I0008-02**			Prepared: 05-Sep-2024 Analyzed: 17-Sep-2024 00:31							
2,4-Dinitrophenol	869	100	200	ug/kg	2750	ND	31.6	13-160	1.11	30	Q
Dibenzofuran	467	20.0	20.0	ug/kg	500	157	62.1	43-120	14.60	30	
4-Nitrophenol	939	50.0	100	ug/kg	1500	ND	62.6	18-154	1.85	30	
2,4-Dinitrotoluene	1160	50.0	100	ug/kg	1500	ND	77.4	44-150	2.16	30	
Fluorene	535	20.0	20.0	ug/kg	500	225	61.9	40-120	13.70	30	
4-Chlorophenylphenyl ether	377	35.0	50.0	ug/kg	500	ND	75.4	36-141	0.20	30	
Diethyl phthalate	498	35.0	50.0	ug/kg	500	ND	99.6	43-140	1.53	30	
4-Nitroaniline	594	50.0	100	ug/kg	1500	ND	39.6	15-120	21.00	30	
4,6-Dinitro-2-methylphenol	1440	100	200	ug/kg	2750	ND	52.4	33-144	7.47	30	Q
N-Nitrosodiphenylamine	290	10.0	20.0	ug/kg	500	ND	58.0	17-120	2.91	30	
4-Bromophenyl phenyl ether	404	20.0	20.0	ug/kg	500	ND	80.7	39-120	1.51	30	
Hexachlorobenzene	399	20.0	20.0	ug/kg	500	ND	79.9	33-120	1.47	30	
Pentachlorophenol	988	50.0	100	ug/kg	1500	ND	65.9	33-133	1.13	30	
Phenanthrene	672	10.0	20.0	ug/kg	500	415	51.3	49-120	16.70	30	
Anthracene	446	10.0	20.0	ug/kg	500	92.2	70.7	37-120	1.70	30	
Carbazole	438	10.0	20.0	ug/kg	500	37.5	80.2	30-135	2.05	30	
Di-n-Butylphthalate	534	10.0	20.0	ug/kg	500	ND	107	48-126	3.43	30	
Fluoranthene	690	10.0	20.0	ug/kg	500	478	42.5	38-127	10.70	30	
Pyrene	583	10.0	20.0	ug/kg	500	330	50.5	39-122	11.70	30	
Butylbenzylphthalate	535	10.0	20.0	ug/kg	500	ND	107	45-132	5.21	30	
Benzo(a)anthracene	432	10.0	20.0	ug/kg	500	73.7	71.7	44-120	1.02	30	
3,3'-Dichlorobenzidine	ND	50.0	100	ug/kg	1000	ND		10-120			*, U
Chrysene	432	10.0	20.0	ug/kg	500	85.7	69.3	47-120	1.90	30	
bis(2-Ethylhexyl)phthalate	463	40.0	50.0	ug/kg	500	ND	92.6	10-130	4.26	30	
Di-n-Octylphthalate	353	10.0	20.0	ug/kg	500	ND	70.7	10-124	4.48	30	
Benzofluoranthenes, Total	926	30.0	40.0	ug/kg	1000	119	80.8	30-160	1.14	30	
Benzo(a)pyrene	413	10.0	20.0	ug/kg	500	48.1	73.0	37-120	2.47	30	
Indeno(1,2,3-cd)pyrene	229	20.0	20.0	ug/kg	500	ND	45.8	30-160	22.30	30	Q
Dibenzo(a,h)anthracene	231	20.0	20.0	ug/kg	500	ND	46.2	30-160	25.20	30	Q
Benzo(g,h,i)perylene	175	20.0	20.0	ug/kg	500	ND	35.0	10-150	21.30	30	Q
Pyridine	253	100	100	ug/kg	1500	ND	16.9	10-147	41.90	30	*
1-Methylnaphthalene	424	10.0	20.0	ug/kg	500	46.6	75.4	42-120	9.25	30	
Surrogate: 2-Fluorophenol	456			ug/kg	*750*	*477*	*60.9*	*27-120*			
Surrogate: Phenol-d5	465			ug/kg	*750*	*474*	*62.0*	*29-120*			
Surrogate: 2-Chlorophenol-d4	515			ug/kg	*750*	*538*	*68.7*	*31-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMI0092 - EPA 8270E

Instrument: NT10 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMI0092-MSD1)	**Source: 24I0008-02**			Prepared: 05-Sep-2024 Analyzed: 17-Sep-2024 00:31							
Surrogate: 1,2-Dichlorobenzene-d4	316			ug/kg	*500*	*337*	*63.3*	*32-120*			
Surrogate: Nitrobenzene-d5	337			ug/kg	*500*	*363*	*67.4*	*30-120*			
Surrogate: 2-Fluorobiphenyl	328			ug/kg	*500*	*362*	*65.7*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	574			ug/kg	*750*	*696*	*76.6*	*24-134*			
Surrogate: p-Terphenyl-d14	411			ug/kg	*500*	*536*	*82.2*	*37-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMI0093 - EPA 8270E-SIM

Instrument: NT17 Analyst: JZ

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0093-BLK1)	Prepared: 05-Sep-2024 Analyzed: 11-Sep-2024 19:20										
Naphthalene	ND	2.50	5.00	ug/kg							U
2-Methylnaphthalene	ND	2.50	5.00	ug/kg							U
1-Methylnaphthalene	ND	2.50	5.00	ug/kg							U
Acenaphthylene	ND	2.50	5.00	ug/kg							U
Acenaphthene	ND	2.50	5.00	ug/kg							U
Dibenzofuran	ND	2.50	5.00	ug/kg							U
Fluorene	ND	2.50	5.00	ug/kg							U
Phenanthrene	ND	2.50	5.00	ug/kg							U
Anthracene	ND	2.50	5.00	ug/kg							U
Fluoranthene	ND	2.50	5.00	ug/kg							U
Pyrene	ND	2.50	5.00	ug/kg							U
Benzo(a)anthracene	ND	2.50	5.00	ug/kg							U
Chrysene	ND	2.50	5.00	ug/kg							U
Benzo(b)fluoranthene	ND	2.50	5.00	ug/kg							U
Benzo(k)fluoranthene	ND	2.50	5.00	ug/kg							U
Benzo(j)fluoranthene	ND	2.50	5.00	ug/kg							U
Benzofluoranthenes, Total	ND	7.50	15.0	ug/kg							U
Benzo(a)pyrene	ND	2.50	5.00	ug/kg							U
Indeno(1,2,3-cd)pyrene	ND	2.50	5.00	ug/kg							U
Dibenzo(a,h)anthracene	ND	2.50	5.00	ug/kg							U
Benzo(g,h,i)perylene	2.72	2.50	5.00	ug/kg							J
Surrogate: 2-Methylnaphthalene-d10	109			ug/kg	*150*		*72.6*	*32-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	136			ug/kg	*150*		*90.7*	*21-133*			
Surrogate: Fluoranthene-d10	137			ug/kg	*150*		*91.5*	*36-134*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMI0093 - EPA 8270E-SIM

Instrument: NT17 Analyst: JZ

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0093-BS1)					Prepared: 05-Sep-2024 Analyzed: 11-Sep-2024 19:51						
Naphthalene	181	2.50	5.00	ug/kg	300		60.5	23-120			
2-Methylnaphthalene	191	2.50	5.00	ug/kg	300		63.7	25-120			
1-Methylnaphthalene	191	2.50	5.00	ug/kg	300		63.5	26-120			
Acenaphthylene	168	2.50	5.00	ug/kg	300		56.1	16-120			
Acenaphthene	196	2.50	5.00	ug/kg	300		65.4	23-120			
Dibenzofuran	206	2.50	5.00	ug/kg	300		68.8	26-120			
Fluorene	206	2.50	5.00	ug/kg	300		68.6	27-120			
Phenanthrene	218	2.50	5.00	ug/kg	300		72.7	30-120			
Anthracene	196	2.50	5.00	ug/kg	300		65.2	22-120			
Fluoranthene	228	2.50	5.00	ug/kg	300		76.0	31-120			
Pyrene	234	2.50	5.00	ug/kg	300		78.0	30-120			
Benzo(a)anthracene	223	2.50	5.00	ug/kg	300		74.2	32-120			
Chrysene	227	2.50	5.00	ug/kg	300		75.6	35-120			
Benzo(b)fluoranthene	304	2.50	5.00	ug/kg	300		101	25-150			
Benzo(k)fluoranthene	273	2.50	5.00	ug/kg	300		91.2	30-141			
Benzo(j)fluoranthene	262	2.50	5.00	ug/kg	300		87.3	26-143			
Benzofluoranthenes, Total	851	7.50	15.0	ug/kg	900		94.6	29-141			
Benzo(a)pyrene	227	2.50	5.00	ug/kg	300		75.6	19-120			
Indeno(1,2,3-cd)pyrene	266	2.50	5.00	ug/kg	300		88.7	36-138			
Dibenzo(a,h)anthracene	313	2.50	5.00	ug/kg	300		104	35-149			
Benzo(g,h,i)perylene	300	2.50	5.00	ug/kg	300		99.9	35-144			
Surrogate: 2-Methylnaphthalene-d10	115			ug/kg	*150*		*76.7*	*32-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	147			ug/kg	*150*		*98.2*	*21-133*			
Surrogate: Fluoranthene-d10	145			ug/kg	*150*		*96.8*	*36-134*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMI0093 - EPA 8270E-SIM

Instrument: NT17 Analyst: JZ

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0093-BSD1)					Prepared: 05-Sep-2024 Analyzed: 11-Sep-2024 20:21						
Naphthalene	179	2.50	5.00	ug/kg	300		59.6	23-120	1.49	30	
2-Methylnaphthalene	183	2.50	5.00	ug/kg	300		61.1	25-120	4.22	30	
1-Methylnaphthalene	184	2.50	5.00	ug/kg	300		61.3	26-120	3.58	30	
Acenaphthylene	165	2.50	5.00	ug/kg	300		55.1	16-120	1.65	30	
Acenaphthene	193	2.50	5.00	ug/kg	300		64.4	23-120	1.55	30	
Dibenzofuran	202	2.50	5.00	ug/kg	300		67.2	26-120	2.35	30	
Fluorene	202	2.50	5.00	ug/kg	300		67.4	27-120	1.73	30	
Phenanthrene	217	2.50	5.00	ug/kg	300		72.4	30-120	0.36	30	
Anthracene	194	2.50	5.00	ug/kg	300		64.5	22-120	1.09	30	
Fluoranthene	234	2.50	5.00	ug/kg	300		78.0	31-120	2.54	30	
Pyrene	238	2.50	5.00	ug/kg	300		79.3	30-120	1.63	30	
Benzo(a)anthracene	227	2.50	5.00	ug/kg	300		75.7	32-120	2.01	30	
Chrysene	230	2.50	5.00	ug/kg	300		76.8	35-120	1.51	30	
Benzo(b)fluoranthene	307	2.50	5.00	ug/kg	300		102	25-150	0.99	30	
Benzo(k)fluoranthene	276	2.50	5.00	ug/kg	300		92.0	30-141	0.89	30	
Benzo(j)fluoranthene	275	2.50	5.00	ug/kg	300		91.7	26-143	5.00	30	
Benzofluoranthenes, Total	867	7.50	15.0	ug/kg	900		96.3	29-141	1.84	30	
Benzo(a)pyrene	231	2.50	5.00	ug/kg	300		76.9	19-120	1.67	30	
Indeno(1,2,3-cd)pyrene	273	2.50	5.00	ug/kg	300		91.2	36-138	2.70	30	
Dibenzo(a,h)anthracene	313	2.50	5.00	ug/kg	300		104	35-149	0.15	30	
Benzo(g,h,i)perylene	296	2.50	5.00	ug/kg	300		98.7	35-144	1.21	30	
Surrogate: 2-Methylnaphthalene-d10	114			ug/kg	*150*		*75.9*	*32-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	149			ug/kg	*150*		*99.2*	*21-133*			
Surrogate: Fluoranthene-d10	150			ug/kg	*150*		*100*	*36-134*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMI0093 - EPA 8270E-SIM

Instrument: NT17 Analyst: JZ

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMI0093-MS1)	**Source: 24I0008-03**			Prepared: 05-Sep-2024 Analyzed: 11-Sep-2024 22:22							
Naphthalene	249	7.50	15.0	ug/kg	300	85.9	54.4	23-120			D
2-Methylnaphthalene	278	7.50	15.0	ug/kg	300	307	-9.8	25-120			*, D
1-Methylnaphthalene	249	7.50	15.0	ug/kg	300	204	15.1	26-120			*, D
Acenaphthylene	206	7.50	15.0	ug/kg	300	14.7	63.6	16-120			D
Acenaphthene	555	7.50	15.0	ug/kg	300	694	-46.5	23-120			*, D
Dibenzofuran	388	7.50	15.0	ug/kg	300	340	16.1	26-120			*, D
Fluorene	466	7.50	15.0	ug/kg	300	466	.0	27-120			*, D
Phenanthrene	727	7.50	15.0	ug/kg	300	660	22.5	30-120			*, D
Anthracene	277	7.50	15.0	ug/kg	300	81.3	65.1	22-120			D
Fluoranthene	549	7.50	15.0	ug/kg	300	271	92.6	31-120			D
Pyrene	453	7.50	15.0	ug/kg	300	210	80.9	30-120			D
Benzo(a)anthracene	285	7.50	15.0	ug/kg	300	58.7	75.3	32-120			D
Chrysene	301	7.50	15.0	ug/kg	300	76.6	74.9	35-120			D
Benzo(b)fluoranthene	257	7.50	15.0	ug/kg	300	37.4	73.1	25-150			D
Benzo(k)fluoranthene	240	7.50	15.0	ug/kg	300	17.3	74.3	30-141			D
Benzo(j)fluoranthene	227	7.50	15.0	ug/kg	300	17.9	69.5	26-143			D
Benzofluoranthenes, Total	728	22.5	45.0	ug/kg	900	71.5	72.9	29-141			D
Benzo(a)pyrene	258	7.50	15.0	ug/kg	300	42.9	71.6	19-120			D
Indeno(1,2,3-cd)pyrene	228	7.50	15.0	ug/kg	300	15.8	70.9	36-138			D
Dibenzo(a,h)anthracene	231	7.50	15.0	ug/kg	300	ND	76.9	35-149			D
Benzo(g,h,i)perylene	215	7.50	15.0	ug/kg	300	23.3	63.8	35-144			D
Surrogate: 2-Methylnaphthalene-d10	116			ug/kg	*150*	*121*	*77.4*	*32-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	106			ug/kg	*150*	*107*	*70.7*	*21-133*			
Surrogate: Fluoranthene-d10	149			ug/kg	*150*	*142*	*99.3*	*36-134*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMI0093 - EPA 8270E-SIM

Instrument: NT17 Analyst: JZ

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMI0093-MSD1)	**Source: 24I0008-03**			Prepared: 05-Sep-2024 Analyzed: 11-Sep-2024 22:52							
Naphthalene	295	7.50	15.0	ug/kg	300	85.9	69.6	23-120	16.80	30	D
2-Methylnaphthalene	316	7.50	15.0	ug/kg	300	307	2.9	25-120	12.80	30	*, D
1-Methylnaphthalene	291	7.50	15.0	ug/kg	300	204	29.0	26-120	15.50	30	D
Acenaphthylene	249	7.50	15.0	ug/kg	300	14.7	78.1	16-120	19.20	30	D
Acenaphthene	624	7.50	15.0	ug/kg	300	694	-23.3	23-120	11.80	30	*, D
Dibenzofuran	440	7.50	15.0	ug/kg	300	340	33.5	26-120	12.60	30	D
Fluorene	525	7.50	15.0	ug/kg	300	466	19.7	27-120	11.90	30	*, D
Phenanthrene	828	7.50	15.0	ug/kg	300	660	56.1	30-120	13.00	30	D
Anthracene	337	7.50	15.0	ug/kg	300	81.3	85.3	22-120	19.70	30	D
Fluoranthene	653	7.50	15.0	ug/kg	300	271	127	31-120	17.30	30	*, D
Pyrene	556	7.50	15.0	ug/kg	300	210	115	30-120	20.50	30	D
Benzo(a)anthracene	338	7.50	15.0	ug/kg	300	58.7	92.9	32-120	17.00	30	D
Chrysene	362	7.50	15.0	ug/kg	300	76.6	95.0	35-120	18.20	30	D
Benzo(b)fluoranthene	342	7.50	15.0	ug/kg	300	37.4	102	25-150	28.60	30	D
Benzo(k)fluoranthene	266	7.50	15.0	ug/kg	300	17.3	82.9	30-141	10.10	30	D
Benzo(j)fluoranthene	278	7.50	15.0	ug/kg	300	17.9	86.7	26-143	20.40	30	D
Benzofluoranthenes, Total	879	22.5	45.0	ug/kg	900	71.5	89.7	29-141	18.90	30	D
Benzo(a)pyrene	312	7.50	15.0	ug/kg	300	42.9	89.8	19-120	19.20	30	D
Indeno(1,2,3-cd)pyrene	271	7.50	15.0	ug/kg	300	15.8	85.1	36-138	17.10	30	D
Dibenzo(a,h)anthracene	278	7.50	15.0	ug/kg	300	ND	92.7	35-149	18.60	30	D
Benzo(g,h,i)perylene	253	7.50	15.0	ug/kg	300	23.3	76.5	35-144	16.20	30	D
Surrogate: 2-Methylnaphthalene-d10	136			ug/kg	*150*	*121*	*90.6*	*32-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	123			ug/kg	*150*	*107*	*82.0*	*21-133*			
Surrogate: Fluoranthene-d10	176			ug/kg	*150*	*142*	*117*	*36-134*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMI0094 - NWTPH-Dx

Instrument: FID4 Analyst: NRB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0094-BLK1)				Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 11:50						
Diesel Range Organics (C12-C24)	ND	5.00	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	10.0	mg/kg							U
Surrogate: o-Terphenyl	11.8		mg/kg	*11.3*		*105*	*50-150*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMI0094 - NWTPH-Dx

Instrument: FID4 Analyst: NRB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0094-BS1)				Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 12:10						
Diesel Range Organics (C12-C24)	132	5.00	mg/kg	150		88.1	63-120			
Surrogate: o-Terphenyl	11.3		mg/kg	*11.3*		*100*	*50-150*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMI0094 - NWTPH-Dx

Instrument: FID4 Analyst: NRB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0094-BSD1)				Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 12:31						
Diesel Range Organics (C12-C24)	131	5.00	mg/kg	150		87.5	63-120	0.71	30	
Surrogate: o-Terphenyl	10.6		mg/kg	*11.3*		*94.0*	*50-150*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMI0094 - NWTPH-Dx

Instrument: FID4 Analyst: NRB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMI0094-MS1)	**Source: 24I0008-04**		Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 14:13							
Diesel Range Organics (C12-C24)	164	5.30	mg/kg	159	13.3	94.5	63-120			
Surrogate: o-Terphenyl	12.1		mg/kg	*11.9*	*11.9*	*102*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMI0094 - NWTPH-Dx

Instrument: FID4 Analyst: NRB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMI0094-MSD1)	**Source: 24I0008-04**		Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 14:33							
Diesel Range Organics (C12-C24)	144	5.30	mg/kg	159	13.3	82.1	63-120	12.80	30	
Surrogate: o-Terphenyl	10.9		mg/kg	*11.9*	*11.9*	*90.9*	*50-150*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMI0088 - EPA 8082A

Instrument: ECD5 Analyst: AA

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0088-BLK1)				Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 18:37							
Aroclor 1016	ND	10.0	20.0	ug/kg							U
Aroclor 1221	ND	10.0	20.0	ug/kg							U
Aroclor 1232	ND	10.0	20.0	ug/kg							U
Aroclor 1242	ND	10.0	20.0	ug/kg							U
Aroclor 1248	ND	10.0	20.0	ug/kg							U
Aroclor 1254	ND	10.0	20.0	ug/kg							U
Aroclor 1260	ND	10.0	20.0	ug/kg							U
Aroclor 1262	ND	10.0	20.0	ug/kg							U
Aroclor 1268	ND	10.0	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl	34.0			ug/kg	*40.0*		*84.9*	*40-133*			
Surrogate: Tetrachlorometaxylene	32.1			ug/kg	*40.0*		*80.2*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	31.7			ug/kg	*40.0*		*79.4*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	31.4			ug/kg	*40.0*		*78.4*	*53-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMI0088 - EPA 8082A

Instrument: ECD5 Analyst: AA

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMI0088-BS1)				Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 18:58							
Aroclor 1016	480	10.0	20.0	ug/kg	500		96.0	52-120			
Aroclor 1260	420	10.0	20.0	ug/kg	500		84.0	57-120			
Surrogate: Decachlorobiphenyl	36.8			ug/kg	*40.0*		*92.0*	*40-133*			
Surrogate: Tetrachlorometaxylene	37.3			ug/kg	*40.0*		*93.2*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	34.4			ug/kg	*40.0*		*86.1*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	35.8			ug/kg	*40.0*		*89.5*	*53-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMI0088 - EPA 8082A

Instrument: ECD5 Analyst: AA

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMI0088-BSD1)				Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 19:19							
Aroclor 1016	510	10.0	20.0	ug/kg	500		102	52-120	6.01	30	
Aroclor 1260	473	10.0	20.0	ug/kg	500		94.6	57-120	11.80	30	
Surrogate: Decachlorobiphenyl	39.5			ug/kg	*40.0*		*98.6*	*40-133*			
Surrogate: Tetrachlorometaxylene	38.6			ug/kg	*40.0*		*96.4*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	37.2			ug/kg	*40.0*		*92.9*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	36.9			ug/kg	*40.0*		*92.4*	*53-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMI0088 - EPA 8082A

Instrument: ECD5 Analyst: AA

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMI0088-MS1)	**Source: 24I0008-01**			Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 19:39							
Aroclor 1016	475	10.0	20.0	ug/kg	500	ND	95.0	52-120			
Aroclor 1260	447	10.0	20.0	ug/kg	500	ND	89.4	57-120			
Surrogate: Decachlorobiphenyl	36.0			ug/kg	*40.0*		*90.0*	*40-133*			
Surrogate: Tetrachlorometaxylene	38.6			ug/kg	*40.0*		*96.4*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	34.4			ug/kg	*40.0*		*85.9*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	37.2			ug/kg	*40.0*		*92.9*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMI0088 - EPA 8082A

Instrument: ECD5 Analyst: AA

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BMI0088-MSD1)	**Source: 24I0008-01**			Prepared: 05-Sep-2024 Analyzed: 10-Sep-2024 20:00							
Aroclor 1016	441	10.0	20.0	ug/kg	500	ND	88.2	52-120	7.28	30	
Aroclor 1260	419	10.0	20.0	ug/kg	500	ND	83.8	57-120	6.49	30	
Surrogate: Decachlorobiphenyl	33.9			ug/kg	*40.0*		*84.7*	*40-133*			
Surrogate: Tetrachlorometaxylene	35.4			ug/kg	*40.0*		*88.5*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	32.2			ug/kg	*40.0*		*80.5*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	34.9			ug/kg	*40.0*		*87.1*	*53-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Dioxins/Furans - Quality Control

Batch BMH0140 - EPA 1613B

Instrument: AUTOSPEC01 Analyst: pl

QC Sample/Analyte	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMH0140-BLK1)				Prepared: 03-Sep-2024 Analyzed: 13-Sep-2024 17:37							
2,3,7,8-TCDF		0.655-0.886	0.476	1.00	ND	ng/kg					U
2,3,7,8-TCDD		0.655-0.886	0.459	1.00	ND	ng/kg					U
1,2,3,7,8-PeCDF		1.318-1.783	0.553	1.00	ND	ng/kg					U
2,3,4,7,8-PeCDF		1.318-1.783	0.575	1.00	ND	ng/kg					U
1,2,3,7,8-PeCDD		1.318-1.783	0.817	1.00	ND	ng/kg					U
1,2,3,4,7,8-HxCDF		1.054-1.426	0.541	1.00	ND	ng/kg					U
1,2,3,6,7,8-HxCDF		1.054-1.426	0.547	1.00	ND	ng/kg					U
2,3,4,6,7,8-HxCDF		1.054-1.426	0.595	1.00	ND	ng/kg					U
1,2,3,7,8,9-HxCDF		1.054-1.426	0.999	1.00	ND	ng/kg					U
1,2,3,4,7,8-HxCDD		1.054-1.426	0.910	1.00	ND	ng/kg					U
1,2,3,6,7,8-HxCDD		1.054-1.426	0.932	1.00	ND	ng/kg					U
1,2,3,7,8,9-HxCDD		1.054-1.426	1.00	1.00	ND	ng/kg					U
1,2,3,4,6,7,8-HpCDF		0.893-1.208	0.661	1.00	ND	ng/kg					U
1,2,3,4,7,8,9-HpCDF		0.893-1.208	1.16	1.00	ND	ng/kg					U
1,2,3,4,6,7,8-HpCDD		0.893-1.208	1.58	2.50	ND	ng/kg					U
OCDF		0.757-1.024	2.27	2.50	ND	ng/kg					U
OCDD		0.757-1.024	2.86	10.0	ND	ng/kg					U
Homologue group											
Total TCDF				1.00	ND	ng/kg					U
Total TCDD				1.00	1.06	ng/kg					
Total PeCDF				1.00	ND	ng/kg					U
Total PeCDD				1.00	ND	ng/kg					U
Total HxCDF				1.00	ND	ng/kg					U
Total HxCDD				1.00	ND	ng/kg					U
Total HpCDF				1.00	ND	ng/kg					U
Total HpCDD				1.00	ND	ng/kg					U

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):	0.53
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):	0.00
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC=ND):	0.53
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0 EDL, EMPC=ND):	0.00

Labeled compounds				
13C12-2,3,7,8-TCDF	*0.812*	*0.655-0.886*	*74.3*	*24-169 %*
13C12-2,3,7,8-TCDD	*0.760*	*0.655-0.886*	*75.9*	*25-164 %*
13C12-1,2,3,7,8-PeCDF	*1.591*	*1.318-1.783*	*73.5*	*24-185 %*
13C12-2,3,4,7,8-PeCDF	*1.606*	*1.318-1.783*	*67.0*	*21-178 %*

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Dioxins/Furans - Quality Control

Batch BMH0140 - EPA 1613B

Instrument: AUTOSPEC01 Analyst: pl

QC Sample/Analyte	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMH0140-BLK1)				Prepared: 03-Sep-2024	Analyzed: 13-Sep-2024 17:37						
13C12-1,2,3,7,8-PeCDD	*1.617*	*1.318-1.783*				*75.5*		*25-181 %*			
13C12-1,2,3,4,7,8-HxCDF	*0.521*	*0.434-0.587*				*115*		*26-152 %*			
13C12-1,2,3,6,7,8-HxCDF	*0.531*	*0.434-0.587*				*112*		*26-123 %*			
13C12-2,3,4,6,7,8-HxCDF	*0.530*	*0.434-0.587*				*108*		*28-136 %*			
13C12-1,2,3,7,8,9-HxCDF	*0.504*	*0.434-0.587*				*89.4*		*29-147 %*			
13C12-1,2,3,4,7,8-HxCDD	*1.168*	*1.054-1.426*				*98.8*		*32-141 %*			
13C12-1,2,3,6,7,8-HxCDD	*1.314*	*1.054-1.426*				*108*		*28-130 %*			
13C12-1,2,3,4,6,7,8-HpCDF	*0.395*	*0.374-0.506*				*89.8*		*28-143 %*			
13C12-1,2,3,4,7,8,9-HpCDF	*0.393*	*0.374-0.506*				*76.7*		*26-138 %*			
13C12-1,2,3,4,6,7,8-HpCDD	*0.965*	*0.893-1.208*				*88.8*		*23-140 %*			
13C12-OCDD	*0.933*	*0.757-1.024*				*84.3*		*17-157 %*			
37Cl4-2,3,7,8-TCDD						*85.1*		*35-197 %*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Dioxins/Furans - Quality Control

Batch BMH0140 - EPA 1613B

Instrument: AUTOSPEC01 Analyst: pl

QC Sample/Analyte	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMH0140-BS1)				Prepared: 03-Sep-2024	Analyzed: 13-Sep-2024 18:26						
2,3,7,8-TCDF	0.795	0.655-0.886		1.00	20.0	ng/kg	100	75-158 %			
2,3,7,8-TCDD	0.744	0.655-0.886		1.00	19.9	ng/kg	99.6	67-158 %			
1,2,3,7,8-PeCDF	1.619	1.318-1.783		1.00	97.5	ng/kg	97.5	80-134 %			
2,3,4,7,8-PeCDF	1.662	1.318-1.783		1.00	98.7	ng/kg	98.7	68-160 %			
1,2,3,7,8-PeCDD	1.378	1.318-1.783		1.00	96.8	ng/kg	96.8	70-142 %			
1,2,3,4,7,8-HxCDF	1.268	1.054-1.426		1.00	97.6	ng/kg	97.6	72-134 %			
1,2,3,6,7,8-HxCDF	1.240	1.054-1.426		1.00	94.0	ng/kg	94.0	84-130 %			
2,3,4,6,7,8-HxCDF	1.077	1.054-1.426		1.00	98.3	ng/kg	98.3	70-156 %			
1,2,3,7,8,9-HxCDF	1.296	1.054-1.426		1.00	107	ng/kg	107	78-130 %			
1,2,3,4,7,8-HxCDD	1.264	1.054-1.426		1.00	109	ng/kg	109	70-164 %			
1,2,3,6,7,8-HxCDD	1.223	1.054-1.426		1.00	97.5	ng/kg	97.5	76-134 %			
1,2,3,7,8,9-HxCDD	1.080	1.054-1.426		1.00	90.9	ng/kg	90.9	64-162 %			
1,2,3,4,6,7,8-HpCDF	1.034	0.893-1.208		1.00	96.1	ng/kg	96.1	82-122 %			
1,2,3,4,7,8,9-HpCDF	0.968	0.893-1.208		1.00	99.0	ng/kg	99.0	78-138 %			
1,2,3,4,6,7,8-HpCDD	0.991	0.893-1.208		2.50	98.1	ng/kg	98.1	70-140 %			
OCDF	0.859	0.757-1.024		2.50	146	ng/kg	72.9	63-170 %			
OCDD	0.885	0.757-1.024		10.0	178	ng/kg	88.8	78-144 %			
Labeled compounds											
13C12-2,3,7,8-TCDF	*0.794*	*0.655-0.886*			*76.4*			*24-169 %*			
13C12-2,3,7,8-TCDD	*0.782*	*0.655-0.886*			*84.1*			*25-164 %*			
13C12-1,2,3,7,8-PeCDF	*1.496*	*1.318-1.783*			*80.9*			*24-185 %*			
13C12-2,3,4,7,8-PeCDF	*1.535*	*1.318-1.783*			*75.3*			*21-178 %*			
13C12-1,2,3,7,8-PeCDD	*1.640*	*1.318-1.783*			*81.4*			*25-181 %*			
13C12-1,2,3,4,7,8-HxCDF	*0.544*	*0.434-0.587*			*113*			*26-152 %*			
13C12-1,2,3,6,7,8-HxCDF	*0.559*	*0.434-0.587*			*115*			*26-123 %*			
13C12-2,3,4,6,7,8-HxCDF	*0.517*	*0.434-0.587*			*107*			*28-136 %*			
13C12-1,2,3,7,8,9-HxCDF	*0.530*	*0.434-0.587*			*91.0*			*29-147 %*			
13C12-1,2,3,4,7,8-HxCDD	*1.209*	*1.054-1.426*			*100*			*32-141 %*			
13C12-1,2,3,6,7,8-HxCDD	*1.270*	*1.054-1.426*			*109*			*28-130 %*			
13C12-1,2,3,4,6,7,8-HpCDF	*0.391*	*0.374-0.506*			*93.2*			*28-143 %*			
13C12-1,2,3,4,7,8,9-HpCDF	*0.446*	*0.374-0.506*			*74.7*			*26-138 %*			
13C12-1,2,3,4,6,7,8-HpCDD	*0.997*	*0.893-1.208*			*94.4*			*23-140 %*			
13C12-OCDD	*0.946*	*0.757-1.024*			*88.2*			*17-157 %*			
37Cl4-2,3,7,8-TCDD					*86.2*			*35-197 %*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Dioxins/Furans - Quality Control

Batch BMH0140 - EPA 1613B

Instrument: AUTOSPEC01 Analyst: pl

QC Sample/Analyte	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMH0140-BSD1)				Prepared: 03-Sep-2024 Analyzed: 13-Sep-2024 19:15							
2,3,7,8-TCDF	0.793	0.655-0.886		1.00	19.6	ng/kg	98.0	75-158 %	2.06	25	
2,3,7,8-TCDD	0.747	0.655-0.886		1.00	19.2	ng/kg	96.0	67-158 %	3.69	25	
1,2,3,7,8-PeCDF	1.645	1.318-1.783		1.00	87.8	ng/kg	87.8	80-134 %	10.50	25	
2,3,4,7,8-PeCDF	1.540	1.318-1.783		1.00	103	ng/kg	103	68-160 %	4.35	25	
1,2,3,7,8-PeCDD	1.478	1.318-1.783		1.00	95.7	ng/kg	95.7	70-142 %	1.14	25	
1,2,3,4,7,8-HxCDF	1.213	1.054-1.426		1.00	98.7	ng/kg	98.7	72-134 %	1.15	25	
1,2,3,6,7,8-HxCDF	1.191	1.054-1.426		1.00	114	ng/kg	114	84-130 %	19.60	25	
2,3,4,6,7,8-HxCDF	1.275	1.054-1.426		1.00	95.5	ng/kg	95.5	70-156 %	2.88	25	
1,2,3,7,8,9-HxCDF	1.104	1.054-1.426		1.00	106	ng/kg	106	78-130 %	0.81	25	
1,2,3,4,7,8-HxCDD	1.295	1.054-1.426		1.00	106	ng/kg	106	70-164 %	2.71	25	
1,2,3,6,7,8-HxCDD	1.293	1.054-1.426		1.00	102	ng/kg	102	76-134 %	4.37	25	
1,2,3,7,8,9-HxCDD	1.174	1.054-1.426		1.00	99.4	ng/kg	99.4	64-162 %	8.94	25	
1,2,3,4,6,7,8-HpCDF	1.103	0.893-1.208		1.00	92.2	ng/kg	92.2	82-122 %	4.16	25	
1,2,3,4,7,8,9-HpCDF	1.072	0.893-1.208		1.00	96.1	ng/kg	96.1	78-138 %	3.00	25	
1,2,3,4,6,7,8-HpCDD	1.025	0.893-1.208		2.50	106	ng/kg	106	70-140 %	7.64	25	
OCDF	0.942	0.757-1.024		2.50	147	ng/kg	73.3	63-170 %	0.52	25	
OCDD	0.994	0.757-1.024		10.0	191	ng/kg	95.7	78-144 %	7.44	25	
Labeled compounds											
13C12-2,3,7,8-TCDF	*0.786*	*0.655-0.886*			*69.4*			*24-169 %*			
13C12-2,3,7,8-TCDD	*0.784*	*0.655-0.886*			*76.2*			*25-164 %*			
13C12-1,2,3,7,8-PeCDF	*1.618*	*1.318-1.783*			*75.8*			*24-185 %*			
13C12-2,3,4,7,8-PeCDF	*1.526*	*1.318-1.783*			*65.0*			*21-178 %*			
13C12-1,2,3,7,8-PeCDD	*1.654*	*1.318-1.783*			*74.3*			*25-181 %*			
13C12-1,2,3,4,7,8-HxCDF	*0.517*	*0.434-0.587*			*106*			*26-152 %*			
13C12-1,2,3,6,7,8-HxCDF	*0.506*	*0.434-0.587*			*102*			*26-123 %*			
13C12-2,3,4,6,7,8-HxCDF	*0.496*	*0.434-0.587*			*101*			*28-136 %*			
13C12-1,2,3,7,8,9-HxCDF	*0.558*	*0.434-0.587*			*88.8*			*29-147 %*			
13C12-1,2,3,4,7,8-HxCDD	*1.228*	*1.054-1.426*			*93.7*			*32-141 %*			
13C12-1,2,3,6,7,8-HxCDD	*1.204*	*1.054-1.426*			*102*			*28-130 %*			
13C12-1,2,3,4,6,7,8-HpCDF	*0.440*	*0.374-0.506*			*93.5*			*28-143 %*			
13C12-1,2,3,4,7,8,9-HpCDF	*0.446*	*0.374-0.506*			*69.2*			*26-138 %*			
13C12-1,2,3,4,6,7,8-HpCDD	*1.054*	*0.893-1.208*			*86.9*			*23-140 %*			
13C12-OCDD	*0.938*	*0.757-1.024*			*77.7*			*17-157 %*			
37Cl4-2,3,7,8-TCDD					*80.2*			*35-197 %*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMI0056 - EPA 7471B

Instrument: HYDRA Analyst: ml

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0056-BLK1)				Prepared: 04-Sep-2024 Analyzed: 09-Sep-2024 10:34							
Mercury	ND	0.00525	0.0250	mg/kg							U
LCS (BMI0056-BS1)				Prepared: 04-Sep-2024 Analyzed: 09-Sep-2024 10:37							
Mercury	0.501	0.00525	0.0250	mg/kg	0.500		100	80-120			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMI0146 - EPA 6020B

Instrument: ICPMS1 Analyst: DOE

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMI0146-BLK1)					Prepared: 10-Sep-2024 Analyzed: 11-Sep-2024 17:04							
Barium	135	ND	0.11	0.50	mg/kg							U
Lead	208	ND	0.05	0.10	mg/kg							U
Arsenic	75a	ND	0.04	0.20	mg/kg							U
Cadmium	111	ND	0.03	0.10	mg/kg							U
Copper	63	ND	0.17	0.50	mg/kg							U
Nickel	60	ND	0.08	0.50	mg/kg							U
Nickel	62	ND	0.22	0.50	mg/kg							U
Zinc	66	ND	2.9	6.0	mg/kg							U
Blank (BMI0146-BLK2)					Prepared: 10-Sep-2024 Analyzed: 12-Sep-2024 19:53							
Antimony	121	ND	0.10	0.20	mg/kg							U
Beryllium	9	ND	0.02	0.20	mg/kg							U
Chromium	52	ND	0.26	0.50	mg/kg							U
Silver	107	ND	0.02	0.20	mg/kg							U
Thallium	205	ND	0.02	0.20	mg/kg							U
LCS (BMI0146-BS1)					Prepared: 10-Sep-2024 Analyzed: 11-Sep-2024 17:09							
Barium	135	25.4	0.11	0.50	mg/kg	25.0		102	80-120			
Lead	208	27.0	0.05	0.10	mg/kg	25.0		108	80-120			
Arsenic	75a	23.3	0.04	0.20	mg/kg	25.0		93.3	80-120			
Copper	63	25.9	0.17	0.50	mg/kg	25.0		104	80-120			
Nickel	60	25.3	0.08	0.50	mg/kg	25.0		101	80-120			
Nickel	62	25.6	0.22	0.50	mg/kg	25.0		102	80-120			
Zinc	66	76.7	2.9	6.0	mg/kg	80.0		95.8	80-120			
LCS (BMI0146-BS2)					Prepared: 10-Sep-2024 Analyzed: 12-Sep-2024 19:58							
Antimony	121	25.0	0.10	0.20	mg/kg	25.0		100	80-120			
Beryllium	9	23.6	0.02	0.20	mg/kg	25.0		94.3	80-120			
Chromium	52	26.0	0.26	0.50	mg/kg	25.0		104	80-120			
Silver	107	26.0	0.02	0.20	mg/kg	25.0		104	80-120			
Thallium	205	26.1	0.02	0.20	mg/kg	25.0		104	80-120			
Cadmium	111	25.4	0.03	0.10	mg/kg	25.0		101	80-120			
Duplicate (BMI0146-DUP1)			**Source: 24I0008-01**		Prepared: 10-Sep-2024 Analyzed: 12-Sep-2024 22:34							
Antimony	121	ND	0.11	0.21	mg/kg		ND					U
Barium	135	40.6	0.12	0.52	mg/kg		34.8			15.50	20	
Beryllium	9	0.20	0.02	0.21	mg/kg		0.17			14.90	20	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMI0146 - EPA 6020B

Instrument: ICPMS1 Analyst: DOE

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Duplicate (BMI0146-DUP1)			**Source: 24I0008-01**		Prepared: 10-Sep-2024 Analyzed: 12-Sep-2024 22:34							
Chromium	52	15.9	0.27	0.52	mg/kg		18.2			13.30	20	
Lead	208	5.01	0.05	0.10	mg/kg		5.51			9.33	20	
Silver	107	0.05	0.02	0.21	mg/kg		0.05			2.54	20	J
Thallium	205	0.05	0.03	0.21	mg/kg		0.04			2.59	20	J
Arsenic	75a	5.64	0.04	0.21	mg/kg		6.23			9.93	20	
Cadmium	111	0.07	0.03	0.10	mg/kg		0.11			39.70	20	L, J
Copper	63	22.3	0.18	0.52	mg/kg		23.8			6.56	20	
Nickel	60	26.6	0.08	0.52	mg/kg		30.4			13.40	20	
Selenium	78	0.51	0.19	0.52	mg/kg		0.45			12.40	20	J
Zinc	66	45.4	3.1	6.3	mg/kg		50.7			10.90	20	
Duplicate (BMI0146-DUP2)			**Source: 24I0008-01**		Prepared: 10-Sep-2024 Analyzed: 13-Sep-2024 21:34							
Chromium	52	18.0	1.36	2.62	mg/kg		18.2			1.16	20	D
Matrix Spike (BMI0146-MS1)			**Source: 24I0008-01**		Prepared: 10-Sep-2024 Analyzed: 12-Sep-2024 22:39							
Antimony	121	1.79	0.11	0.21	mg/kg	26.1	ND	6.9	75-125			*
Barium	135	75.4	0.12	0.52	mg/kg	26.1	34.8	156	75-125			*
Beryllium	9	26.2	0.02	0.21	mg/kg	26.1	0.17	99.6	75-125			
Chromium	52	33.9	0.27	0.52	mg/kg	26.1	18.2	60.2	75-125			
Lead	208	34.1	0.05	0.10	mg/kg	26.1	5.51	110	75-125			
Silver	107	26.5	0.02	0.21	mg/kg	26.1	0.05	101	75-125			
Thallium	205	27.5	0.03	0.21	mg/kg	26.1	0.04	105	75-125			
Arsenic	75a	32.3	0.04	0.21	mg/kg	26.1	6.23	99.7	75-125			
Cadmium	111	27.0	0.03	0.10	mg/kg	26.1	0.11	103	75-125			
Copper	63	47.9	0.18	0.52	mg/kg	26.1	23.8	92.3	75-125			
Nickel	60	55.3	0.08	0.52	mg/kg	26.1	30.4	95.5	75-125			
Selenium	78	79.8	0.19	0.52	mg/kg	83.5	0.45	95.0	75-125			
Zinc	66	130	3.0	6.3	mg/kg	83.5	50.7	94.7	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike (BMI0146-MS2)			**Source: 24I0008-01**		Prepared: 10-Sep-2024 Analyzed: 13-Sep-2024 21:39							
Chromium	52	38.7	1.36	2.61	mg/kg	26.1	18.2	78.8	75-125			D

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Certified Analyses included in this Report

Analyte	Certifications
EPA 1613B in Solid	
2,3,7,8-TCDF	DoD-ELAP,NELAP,WADOE
2,3,7,8-TCDD	DoD-ELAP,NELAP,WADOE
1,2,3,7,8-PeCDF	DoD-ELAP,NELAP,WADOE
2,3,4,7,8-PeCDF	DoD-ELAP,NELAP,WADOE
1,2,3,7,8-PeCDD	DoD-ELAP,NELAP,WADOE
1,2,3,4,7,8-HxCDF	DoD-ELAP,NELAP,WADOE
1,2,3,6,7,8-HxCDF	DoD-ELAP,NELAP,WADOE
2,3,4,6,7,8-HxCDF	DoD-ELAP,NELAP,WADOE
1,2,3,7,8,9-HxCDF	DoD-ELAP,NELAP,WADOE
1,2,3,4,7,8-HxCDD	DoD-ELAP,NELAP,WADOE
1,2,3,6,7,8-HxCDD	DoD-ELAP,NELAP,WADOE
1,2,3,7,8,9-HxCDD	DoD-ELAP,NELAP,WADOE
1,2,3,4,6,7,8-HpCDF	DoD-ELAP,NELAP,WADOE
1,2,3,4,7,8,9-HpCDF	DoD-ELAP,NELAP,WADOE
1,2,3,4,6,7,8-HpCDD	DoD-ELAP,NELAP,WADOE
OCDF	DoD-ELAP,NELAP,WADOE
OCDD	DoD-ELAP,NELAP,WADOE
Total TCDF	DoD-ELAP,NELAP,WADOE
Total TCDD	DoD-ELAP,NELAP,WADOE
Total PeCDF	DoD-ELAP,NELAP,WADOE
Total PeCDD	DoD-ELAP,NELAP,WADOE
Total HxCDF	DoD-ELAP,NELAP,WADOE
Total HxCDD	DoD-ELAP,NELAP,WADOE
Total HpCDF	DoD-ELAP,NELAP,WADOE
Total HpCDD	DoD-ELAP,NELAP,WADOE
13C12-2,3,7,8-TCDF	DoD-ELAP
13C12-2,3,7,8-TCDD	DoD-ELAP
13C12-1,2,3,7,8-PeCDF	DoD-ELAP
13C12-2,3,4,7,8-PeCDF	DoD-ELAP
13C12-1,2,3,7,8-PeCDD	DoD-ELAP

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

13C12-1,2,3,4,7,8-HxCDF	DoD-ELAP
13C12-1,2,3,6,7,8-HxCDF	DoD-ELAP
13C12-2,3,4,6,7,8-HxCDF	DoD-ELAP
13C12-1,2,3,7,8,9-HxCDF	DoD-ELAP
13C12-1,2,3,4,7,8-HxCDD	DoD-ELAP
13C12-1,2,3,6,7,8-HxCDD	DoD-ELAP
13C12-1,2,3,4,6,7,8-HpCDF	DoD-ELAP
13C12-1,2,3,4,7,8,9-HpCDF	DoD-ELAP
13C12-1,2,3,4,6,7,8-HpCDD	DoD-ELAP
13C12-OCDD	DoD-ELAP
37Cl4-2,3,7,8-TCDD	DoD-ELAP
EPA 6020B in Solid	
Silver-107	NELAP,DoD-ELAP,WADOE
Barium-135	NELAP,DoD-ELAP,WADOE,ADEC
Beryllium-9	NELAP,DoD-ELAP,WADOE
Chromium-52	NELAP,DoD-ELAP,WADOE,ADEC
Lead-208	NELAP,DoD-ELAP,WADOE,ADEC
Antimony-121	NELAP,DoD-ELAP,WADOE
Thallium-205	NELAP,DoD-ELAP,WADOE
EPA 6020B UCT-KED in Solid	
Arsenic-75a	NELAP,DoD-ELAP,WADOE,ADEC
Cadmium-111	NELAP,DoD-ELAP,WADOE,ADEC
Copper-63	NELAP,DoD-ELAP,WADOE
Nickel-60	NELAP,DoD-ELAP,WADOE,ADEC
Nickel-62	NELAP,DoD-ELAP,WADOE,ADEC
Selenium-78	NELAP,DoD-ELAP,WADOE
Zinc-66	NELAP,DoD-ELAP,WADOE
EPA 7471B in Solid	
Mercury	WADOE,NELAP,DoD-ELAP
EPA 8082A in Solid	
Aroclor 1016	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,ADEC

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
EPA 8260D in Solid	
Chloromethane	WADOE,DoD-ELAP,NELAP,ADEC
Vinyl Chloride	WADOE,DoD-ELAP,NELAP,ADEC
Bromomethane	WADOE,DoD-ELAP,NELAP,ADEC
Chloroethane	WADOE,DoD-ELAP,NELAP,ADEC
Trichlorofluoromethane	WADOE,DoD-ELAP,NELAP,ADEC
Acrolein	WADOE,DoD-ELAP,NELAP
1,1,2-Trichloro-1,2,2-Trifluoroeth	WADOE,DoD-ELAP,NELAP,ADEC
Acetone	WADOE,DoD-ELAP,NELAP
1,1-Dichloroethene	WADOE,DoD-ELAP,NELAP,ADEC
Iodomethane	WADOE,DoD-ELAP,NELAP,ADEC
Methylene Chloride	WADOE,DoD-ELAP,NELAP,ADEC
Acrylonitrile	WADOE,DoD-ELAP,NELAP
Carbon Disulfide	WADOE,DoD-ELAP,NELAP,ADEC
trans-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,ADEC
Vinyl Acetate	WADOE,DoD-ELAP,NELAP
1,1-Dichloroethane	WADOE,DoD-ELAP,NELAP,ADEC
2-Butanone	WADOE,DoD-ELAP,NELAP

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

2,2-Dichloropropane	WADOE,DoD-ELAP,NELAP
cis-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,ADEC
Chloroform	WADOE,DoD-ELAP,NELAP,ADEC
Bromochloromethane	WADOE,DoD-ELAP,NELAP,ADEC
1,1,1-Trichloroethane	WADOE,DoD-ELAP,NELAP,ADEC
1,1-Dichloropropene	WADOE,DoD-ELAP,NELAP,ADEC
Carbon tetrachloride	WADOE,DoD-ELAP,NELAP,ADEC
1,2-Dichloroethane	WADOE,DoD-ELAP,NELAP,ADEC
Benzene	WADOE,DoD-ELAP,NELAP,ADEC
Trichloroethene	WADOE,DoD-ELAP,NELAP,ADEC
1,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,ADEC
Bromodichloromethane	WADOE,DoD-ELAP,NELAP,ADEC
Dibromomethane	WADOE,DoD-ELAP,NELAP,ADEC
2-Chloroethyl vinyl ether	WADOE,DoD-ELAP,NELAP
4-Methyl-2-Pentanone	WADOE,DoD-ELAP,NELAP
cis-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,ADEC
Toluene	WADOE,DoD-ELAP,NELAP,ADEC
trans-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,ADEC
2-Hexanone	WADOE,DoD-ELAP,NELAP
1,1,2-Trichloroethane	WADOE,DoD-ELAP,NELAP,ADEC
1,3-Dichloropropane	WADOE,DoD-ELAP,NELAP,ADEC
Tetrachloroethene	WADOE,DoD-ELAP,NELAP,ADEC
Dibromochloromethane	WADOE,DoD-ELAP,NELAP,ADEC
1,2-Dibromoethane	WADOE,DoD-ELAP,NELAP,ADEC
Chlorobenzene	WADOE,DoD-ELAP,NELAP,ADEC
Ethylbenzene	WADOE,DoD-ELAP,NELAP,ADEC
1,1,1,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,ADEC
m,p-Xylene	WADOE,DoD-ELAP,NELAP,ADEC
o-Xylene	WADOE,DoD-ELAP,NELAP,ADEC
Xylenes, total	WADOE
Styrene	WADOE,DoD-ELAP,NELAP,ADEC
Bromoform	WADOE,DoD-ELAP,NELAP,ADEC
1,1,2,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,ADEC

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

1,2,3-Trichloropropane	WADOE,DoD-ELAP,NELAP,ADEC
trans-1,4-Dichloro 2-Butene	WADOE,DoD-ELAP,NELAP
n-Propylbenzene	WADOE,DoD-ELAP,NELAP
Bromobenzene	WADOE,DoD-ELAP,NELAP,ADEC
Isopropyl Benzene	WADOE,DoD-ELAP,NELAP,ADEC
2-Chlorotoluene	WADOE,DoD-ELAP,NELAP
4-Chlorotoluene	WADOE,DoD-ELAP,NELAP
t-Butylbenzene	WADOE,DoD-ELAP,NELAP
1,3,5-Trimethylbenzene	WADOE,DoD-ELAP,NELAP
1,2,4-Trimethylbenzene	WADOE,DoD-ELAP,NELAP
s-Butylbenzene	WADOE,DoD-ELAP,NELAP
4-Isopropyl Toluene	WADOE,DoD-ELAP,NELAP
1,3-Dichlorobenzene	WADOE,DoD-ELAP,NELAP
1,4-Dichlorobenzene	WADOE,DoD-ELAP,NELAP
n-Butylbenzene	WADOE,DoD-ELAP,NELAP
1,2-Dichlorobenzene	WADOE,DoD-ELAP,NELAP
1,2-Dibromo-3-chloropropane	WADOE,DoD-ELAP,NELAP,ADEC
1,2,4-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,ADEC
Hexachloro-1,3-Butadiene	WADOE,DoD-ELAP,NELAP,ADEC
Naphthalene	WADOE,DoD-ELAP,NELAP
1,2,3-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,ADEC
Dichlorodifluoromethane	WADOE,DoD-ELAP,NELAP,ADEC
Methyl tert-butyl Ether	WADOE,DoD-ELAP,NELAP
2-Pentanone	WADOE
4-Bromofluorobenzene	WADOE

EPA 8270E in Solid

Phenol	DoD-ELAP,NELAP,WADOE
bis(2-chloroethyl) ether	DoD-ELAP,NELAP,WADOE
2-Chlorophenol	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,NELAP,WADOE
Benzyl Alcohol	DoD-ELAP,NELAP,WADOE

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

2,2'-Oxybis(1-chloropropane)	DoD-ELAP,NELAP
2-Methylphenol	DoD-ELAP,NELAP,WADOE
Hexachloroethane	DoD-ELAP,NELAP,WADOE
N-Nitroso-di-n-Propylamine	DoD-ELAP,NELAP,WADOE
4-Methylphenol	DoD-ELAP,NELAP,WADOE
Nitrobenzene	DoD-ELAP,NELAP,WADOE
Isophorone	DoD-ELAP,NELAP,WADOE
2-Nitrophenol	DoD-ELAP,NELAP,WADOE
2,4-Dimethylphenol	DoD-ELAP,NELAP,WADOE
Bis(2-Chloroethoxy)methane	DoD-ELAP,NELAP,WADOE
2,4-Dichlorophenol	DoD-ELAP,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,NELAP,WADOE
Naphthalene	DoD-ELAP,NELAP,WADOE,ADEC
Benzoic acid	DoD-ELAP,NELAP,WADOE
4-Chloroaniline	DoD-ELAP,NELAP,WADOE
Hexachlorobutadiene	DoD-ELAP,NELAP,WADOE
4-Chloro-3-Methylphenol	DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	DoD-ELAP,NELAP,WADOE,ADEC
Hexachlorocyclopentadiene	DoD-ELAP,NELAP,WADOE
2,4,6-Trichlorophenol	DoD-ELAP,NELAP,WADOE
2,4,5-Trichlorophenol	DoD-ELAP,NELAP,WADOE
2-Chloronaphthalene	DoD-ELAP,NELAP,WADOE
2-Nitroaniline	DoD-ELAP,NELAP,WADOE
Acenaphthylene	DoD-ELAP,NELAP,WADOE,ADEC
Dimethylphthalate	DoD-ELAP,NELAP,WADOE
2,6-Dinitrotoluene	DoD-ELAP,NELAP,WADOE
Acenaphthene	DoD-ELAP,NELAP,WADOE,ADEC
3-Nitroaniline	DoD-ELAP,NELAP,WADOE
2,4-Dinitrophenol	DoD-ELAP,NELAP,WADOE
Dibenzofuran	DoD-ELAP,NELAP,WADOE,ADEC
4-Nitrophenol	DoD-ELAP,NELAP,WADOE
2,4-Dinitrotoluene	DoD-ELAP,NELAP,WADOE
Fluorene	DoD-ELAP,NELAP,WADOE,ADEC

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

4-Chlorophenylphenyl ether	DoD-ELAP,NELAP
Diethyl phthalate	DoD-ELAP,NELAP,WADOE
4-Nitroaniline	DoD-ELAP,NELAP,WADOE
4,6-Dinitro-2-methylphenol	DoD-ELAP,NELAP,WADOE
N-Nitrosodiphenylamine	DoD-ELAP,NELAP,WADOE
4-Bromophenyl phenyl ether	DoD-ELAP,NELAP,WADOE
Hexachlorobenzene	DoD-ELAP,NELAP,WADOE
Pentachlorophenol	DoD-ELAP,NELAP,WADOE
Phenanthrene	DoD-ELAP,NELAP,WADOE,ADEC
Anthracene	DoD-ELAP,NELAP,WADOE,ADEC
Carbazole	DoD-ELAP,NELAP,WADOE,ADEC
Di-n-Butylphthalate	DoD-ELAP,NELAP,WADOE
Fluoranthene	DoD-ELAP,NELAP,WADOE,ADEC
Pyrene	DoD-ELAP,NELAP,WADOE,ADEC
Butylbenzylphthalate	DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	DoD-ELAP,NELAP,WADOE,ADEC
3,3'-Dichlorobenzidine	DoD-ELAP,NELAP,WADOE
Chrysene	DoD-ELAP,NELAP,WADOE,ADEC
bis(2-Ethylhexyl)phthalate	DoD-ELAP,NELAP,WADOE
Di-n-Octylphthalate	DoD-ELAP,NELAP,WADOE
Benzofluoranthenes, Total	WADOE,ADEC
Benzo(a)pyrene	DoD-ELAP,NELAP,WADOE,ADEC
Indeno(1,2,3-cd)pyrene	DoD-ELAP,NELAP,WADOE,ADEC
Dibenzo(a,h)anthracene	DoD-ELAP,NELAP,WADOE,ADEC
Benzo(g,h,i)perylene	DoD-ELAP,NELAP,WADOE,ADEC
Pyridine	DoD-ELAP,NELAP,WADOE
1-Methylnaphthalene	DoD-ELAP,NELAP,WADOE,ADEC
EPA 8270E-SIM in Solid	
Naphthalene	ADEC,DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthylene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,WADOE

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Dibenzofuran	ADEC,DoD-ELAP,NELAP
Fluorene	ADEC,DoD-ELAP,NELAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,WADOE
NWTPH-Dx in Solid	
Diesel Range Organics (C12-C2	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-	DoD-ELAP,NELAP,WADOE
NWTPHg in Solid	
Gasoline Range Organics (Tol-N	DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2025
WADOE	WA Dept of Ecology	C558	06/30/2025
WA-DW	Ecology - Drinking Water	C558	06/30/2025

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	27-Sep-2024 16:16

Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
EMPC	Estimated Maximum Possible Concentration qualifier for HRGCMS Dioxin
H	Hold time violation - Hold time was exceeded.
J	Estimated concentration value detected below the reporting limit.
L	Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

21 November 2024

Abhijit R. Joshi
GeoEngineers
17425 Union Hill Road Suite 250
Redmond, WA 98052

RE: POE Marine Terminal SW Improvements (0676-020-07)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
24K0069	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Phillip Bates For Susan Dunnihoo, Director, Client Services

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 24K0069	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: GeoEngineers Inc	Phone: 206.239.3256	Date: 11.4.24	Ice Present?
Client Contact: Abhijit Joshi		No. of Coolers: 1	Cooler Temps: 1.4
Client Project Name: POE Marine Terminal SW Improvement			
Client Project #: 0676-020-04	Samplers: Nathan Solomon		

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Metals	SVOC	PAH-SIM	PCB	TPH-Dx	Gx-VOC (BETX)	VOC (BETX)		Notes/Comments
SP-1-F	11.4.24	1230	Soil	6	X	X	X	X	X	X	X		
SP-1-G		1235		6	X	X	X	X	X	X	X		
SP-1-H		1240		6	X	X	X	X	X	X	X		
SP-1-I		1245		6	X	X	X	X	X	X	X		
SP-1-J		1250		6	X	X	X	X	X	X	X		
SP-1-K		1255		6	X	X	X	X	X	X	X		
SP-1-L		1300		6	X	X	X	X	X	X	X		

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Nathan Solomon	Printed Name: R Leesemann	Printed Name:	Printed Name:
	Company: GEI	Company: ARI	Company:	Company:
	Date & Time: 11.04.24 1456	Date & Time: 11-4-24 1500	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 24K0069	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: GeoEngineers Inc.	Phone: 206.239.3256	Date: 11.4.24	Ice Present?
Client Contact: Abhijit Joshi		No. of Coolers: 1	Cooler Temps: 1.4
Client Project Name: POE Marine Terminal Sm. Improvement			
Client Project #: 0676-020-04	Samplers: Nathan Solomon		

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Metals[1]	SVOC[2]	PAH-SIM	PCB Aroclor	TPH-Dx[3]	Sx-VOC (BETX)	VOC (BETX)	Rush TAT	Notes/Comments
SP-1-F	11.4.24	1230	Soil	6	X	X	X	X	X	X	X	X	
SP-1-G		1235		6	X	X	X	X	X	X	X	X	
SP-1-H		1240		6	X	X	X	X	X	X	X	X	
SP-1-I		1245		6	X	X	X	X	X	X	X	X	
SP-1-J		1250		6	X	X	X	X	X	X	X	X	
SP-1-K		1255		6	X	X	X	X	X	X	X	X	
SP-1-L		1300		6	X	X	X	X	X	X	X	X	

Comments/Special Instructions

1 Antimony, arsenic, barium, beryllium, cadmium, total chromium, copper, lead, mercury, nickel, selenium, silver, thallium and zinc

2 Include Pyridine

3 NWTPH-Dx with acid/silica gel cleanup

Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature)	(Signature)	(Signature)	(Signature)
Printed Name: Nathan Solomon	Printed Name: R Leesemann	Printed Name:	Printed Name:
Company: GEI	Company: ARI	Company:	Company:
Date & Time: 11.04.24 1456	Date & Time: 11-4-24 1500	Date & Time:	Date & Time:

I all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1-F	24K0069-01	Solid	04-Nov-2024 12:30	04-Nov-2024 15:00
SP-1-G	24K0069-02	Solid	04-Nov-2024 12:35	04-Nov-2024 15:00
SP-1-H	24K0069-03	Solid	04-Nov-2024 12:40	04-Nov-2024 15:00
SP-1-I	24K0069-04	Solid	04-Nov-2024 12:45	04-Nov-2024 15:00
SP-1-J	24K0069-05	Solid	04-Nov-2024 12:50	04-Nov-2024 15:00
SP-1-K	24K0069-06	Solid	04-Nov-2024 12:55	04-Nov-2024 15:00
SP-1-L	24K0069-07	Solid	04-Nov-2024 13:00	04-Nov-2024 15:00
Trip Blanks	24K0069-08	Water	04-Nov-2024 12:30	04-Nov-2024 15:00

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Work Order Case Narrative

Client: GeoEngineers
Project: POE Marine Terminal SW Improvements
Project Number: 0676-020-07
Work Order: 24K0069

Revised Report - 11/21/24

The report was revised to report the full list for VOC.

Sample receipt

Sample(s) as listed on the preceding page were received 04-Nov-2024 15:00 under ARI work order 24K0069. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Volatiles - EPA Method SW8260D

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with allowed exceedances. The analyte Trichlorofluoromethane failed high in SMK0083-ICV1 and Dichlorodifluoromethane failed low in SMK0083-ICV1. The associated data has been "Q"-flagged.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The Naphthalene result for sample 24K0069-02 may be biased due to carry over from sample 24K0069-01. This was

originally ignored as the samples were only evaluated for BTEX at first.

The method blank(s) were clean at the reporting limits except for Acetone which had a hit. All samples show a comparable result to the blank and are likely the result of a contamination. The data has been "B"-flagged denoting the discrepancy.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Total Metals - EPA Method 6020B

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations including interference checks were within method requirements for reported elements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The duplicate (DUP) relative percent difference (RPD) were within advisory control limits except as flagged. The matrix spike (MS) percent recoveries were within advisory control limits except Antimony which was out of control low. The deviations have been flagged.

Some standards were expired. Awaiting delivery of new standards.

Total Mercury - EPA Method 7470/7471

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The duplicate (DUP) relative percent difference (RPD) was within advisory control limits. The matrix spike (MS) percent recovery was outside advisory control limits. A post-preparation spike percent recovery met advisory limits. Probable matrix interference.

Calibration standards were expired. Awaiting delivery of new standards.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The sample(s) were extracted and analyzed within the recommended holding times.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits except Hexabromobiphenyl which was out of control low on the back column zb-35 for all samples but met criteria on the front column.

The surrogate percent recoveries were within control limits except as follows. Tetrachlorometaxylene was out of control low on the front column zb-5 in sample 24K0069-01. Tetrachlorometaxylene was out of control high on the back column zb-35 in sample 24K0069-02, the blank spike BMK0280-BS1 and blank spike duplicate BMK0280-BSD1. The deviations have been flagged.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were outside control limits high. The deviations have been flagged.

Results that have been "P1"-flagged indicate a greater than 40% difference between the results on the two analytical columns.

Samples 24K0069-02 and 24K0069-07 were run at dilutions due to the oily characteristics of the extract.

Semivolatiles - EPA Method SW8270E

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements except 3-Nitroaniline and 3,3'-Dichlorobenzidine which were out of control low and 4-Nitrophenol, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene which were out of control high in the initial calibration verification SMK0177-ICV1. All samples which contain analyte have been flagged with a “Q” qualifier.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

All samples run at a dilution due to the extract color and viscosity. Sample 24K0069-05 resulted in non-detected analytes but will not be re-analyzed at a lesser dilution due to the oily nature of the extract.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements except as follows Benzo(g,h,i)perlene which was out of control low in the initial calibration verification SMK0192-ICV1. All associated samples which contain analyte have been flagged with a “Q” qualifier. Benzo(g,h,i)perlene which was out of control low in the continuing calibration verification SMK0192-CCV1. This deviation has been flagged.

Samples 24K0069-01 and 24K0069-03 were re-analyzed due to analytes exceeding the calibration in the original run. Due to the dilution that 24K0069-01 was rerun at, the surrogates were unable to be recovered, the associated data has been "D1"-flagged denoting the discrepancy.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits except Dibenzo(a,h)anthracene-d14 which was out of control high in the method blank, blank spike and blank spike duplicate (BMK0278-BLK1, BMK0278-BS1 and BMK0278-BSD1). The deviations have been flagged.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits except flagged analytes which were out of control high.

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Geo Engineers Project Name: POE Marine Terminal SW

COC No(s): NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 24K0069 Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO
Temperature of Cooler(s) (°C) Time 1.4	Temp Gun ID#:	100970
Was a temperature blank included in the cooler?	YES	NO
Were coolers received between 0°- 6° (°C)	YES	NO
Was sufficient ice used (if appropriate)?	NA YES	NO

Cooler Accepted by: RL Date: 11-4-24 Time: 1500

Complete custody forms and attach all shipping documents

Log-In Phase:

What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block N/A Other:

Are any samples that were out of temperature compliance documented in LIMS?		YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?	SA 11/05/24	YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	SA 11/05/24 NA	8/21/24	

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: SA Date: 11/05/24 Time: 0939 Labels checked by: SA

***** Notify Project Manager of discrepancies or concerns *****

Additional Notes, Discrepancies, & Resolutions:

2 Trip blanks were received but not listed on CoC. Logged at the end of sample list.

Revised CoC received 11/05/24 @1100.

By: SA Date: 11/05/24

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:30
Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 13:12

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24K0069-01 E
Preparation Batch: BMK0124 — Sample Size: 5.29 g (wet) — Dry Weight:4.95 g
Prepared: 11/06/2024 — Final Volume: 5 mL — % Solids: 93.66

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	1.01	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.50	1.01	ND	ug/kg	U
Bromomethane	74-83-9	1	2.02	2.02	ND	ug/kg	U
Chloroethane	75-00-3	1	2.02	2.02	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.01	2.02	ND	ug/kg	U
Acrolein	107-02-8	1	2.52	5.05	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.01	2.02	ND	ug/kg	U
Acetone	67-64-1	1	10.1	10.1	41.5	ug/kg	B
1,1-Dichloroethene	75-35-4	1	0.50	1.01	ND	ug/kg	U
Iodomethane	74-88-4	1	1.01	1.01	ND	ug/kg	U
Methylene Chloride	75-09-2	1	5.05	5.05	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.05	5.05	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.01	1.01	1.26	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.01	1.01	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.05	5.05	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.50	1.01	ND	ug/kg	U
2-Butanone	78-93-3	1	2.52	5.05	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.50	1.01	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.50	1.01	ND	ug/kg	U
Chloroform	67-66-3	1	0.50	1.01	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.50	1.01	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.01	1.01	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.50	1.01	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.50	1.01	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.50	1.01	ND	ug/kg	U
Benzene	71-43-2	1	0.50	1.01	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.50	1.01	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.50	1.01	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.50	1.01	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.50	1.01	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.05	5.05	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.52	5.05	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:30

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 13:12

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
cis-1,3-Dichloropropene	10061-01-5	1	0.50	1.01	ND	ug/kg	U
Toluene	108-88-3	1	0.50	1.01	ND	ug/kg	U
trans-1,3-Dichloropropene	10061-02-6	1	0.50	1.01	ND	ug/kg	U
2-Hexanone	591-78-6	1	2.52	5.05	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.50	1.01	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.50	1.01	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.50	1.01	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.50	1.01	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.50	1.01	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.50	1.01	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.50	1.01	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.50	1.01	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.01	2.02	ND	ug/kg	U
o-Xylene	95-47-6	1	0.50	1.01	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.01	2.02	ND	ug/kg	U
Styrene	100-42-5	1	0.50	1.01	ND	ug/kg	U
Bromoform	75-25-2	1	0.50	1.01	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.50	1.01	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.02	2.02	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.05	5.05	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.50	1.01	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.50	1.01	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.50	1.01	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.50	1.01	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.50	1.01	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.50	1.01	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.50	1.01	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.50	1.01	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.50	1.01	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.50	1.01	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.50	1.01	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.50	1.01	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.50	1.01	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.01	1.01	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.52	5.05	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.52	5.05	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.05	5.05	ND	ug/kg	U
Naphthalene	91-20-3	1	2.52	5.05	168	ug/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:30

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 13:12

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
1,2,3-Trichlorobenzene	87-61-6	1	2.52	5.05	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.50	1.01	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.50	1.01	ND	ug/kg	U
2-Pentanone	107-87-9	1	2.52	5.05	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*121*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*99.3*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*102*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*101*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 11/04/2024 12:30

Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 18:32

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24K0069-01 C

Preparation Batch: BMK0093 — Sample Size: 5.074 g (wet) — Dry Weight:4.75 g

Prepared: 11/05/2024 — Final Volume: 5 mL — % Solids: 93.66

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	5600	9500	ug/kg	
HC ID: GRO						
Surrogate: Toluene-d8			*80-120 %*	*99.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*100*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:30
Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 20:38

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-01 A 04
Preparation Batch: BMK0281 — Sample Size: 10.68 g (wet) — Dry Weight:10.00 g
Prepared: 11/13/2024 — Final Volume: 1 mL — % Solids: 93.66

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	5	50.0	100	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	5	175	250	ND	ug/kg	U
2-Chlorophenol	95-57-8	5	100	100	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	5	50.0	100	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	5	50.0	100	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	5	50.0	100	ND	ug/kg	U
Benzyl Alcohol	100-51-6	5	100	100	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	5	50.0	100	ND	ug/kg	U
2-Methylphenol	95-48-7	5	50.0	100	ND	ug/kg	U
Hexachloroethane	67-72-1	5	50.0	100	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	5	75.0	100	ND	ug/kg	U
4-Methylphenol	106-44-5	5	75.0	100	ND	ug/kg	U
Nitrobenzene	98-95-3	5	50.0	100	ND	ug/kg	U
Isophorone	78-59-1	5	75.0	100	ND	ug/kg	U
2-Nitrophenol	88-75-5	5	50.0	100	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	5	250	500	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	5	50.0	100	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	5	250	500	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	5	50.0	100	ND	ug/kg	U
Naphthalene	91-20-3	5	50.0	100	281	ug/kg	D
Benzoic acid	65-85-0	5	500	1000	ND	ug/kg	U
4-Chloroaniline	106-47-8	5	250	500	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	5	50.0	100	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	5	250	500	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	5	50.0	100	395	ug/kg	D
Hexachlorocyclopentadiene	77-47-4	5	250	500	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	5	250	500	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	5	250	500	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	5	50.0	100	ND	ug/kg	U
2-Nitroaniline	88-74-4	5	250	500	ND	ug/kg	U
Acenaphthylene	208-96-8	5	50.0	100	78.9	ug/kg	J, D
Dimethylphthalate	131-11-3	5	50.0	100	ND	ug/kg	U
2,6-Dinitrotoluene	606-20-2	5	250	500	ND	ug/kg	U
Acenaphthene	83-32-9	5	50.0	100	3930	ug/kg	D
3-Nitroaniline	99-09-2	5	250	500	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:30

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 20:38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	5	500	1000	ND	ug/kg	U
Dibenzofuran	132-64-9	5	100	100	1460	ug/kg	D
4-Nitrophenol	100-02-7	5	250	500	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	5	250	500	ND	ug/kg	U
Fluorene	86-73-7	5	100	100	2640	ug/kg	D
4-Chlorophenylphenyl ether	7005-72-3	5	175	250	ND	ug/kg	U
Diethyl phthalate	84-66-2	5	175	250	ND	ug/kg	U
4-Nitroaniline	100-01-6	5	250	500	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	5	500	1000	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	5	50.0	100	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	5	100	100	ND	ug/kg	U
Hexachlorobenzene	118-74-1	5	100	100	ND	ug/kg	U
Pentachlorophenol	87-86-5	5	250	500	ND	ug/kg	U
Phenanthrene	85-01-8	5	50.0	100	3860	ug/kg	D
Anthracene	120-12-7	5	50.0	100	1100	ug/kg	D
Carbazole	86-74-8	5	50.0	100	457	ug/kg	D
Di-n-Butylphthalate	84-74-2	5	50.0	100	ND	ug/kg	U
Fluoranthene	206-44-0	5	50.0	100	10100	ug/kg	D
Pyrene	129-00-0	5	50.0	100	6110	ug/kg	D
Butylbenzylphthalate	85-68-7	5	50.0	100	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	5	50.0	100	1240	ug/kg	D
3,3'-Dichlorobenzidine	91-94-1	5	250	500	ND	ug/kg	U
Chrysene	218-01-9	5	50.0	100	1200	ug/kg	D
bis(2-Ethylhexyl)phthalate	117-81-7	5	200	250	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	5	50.0	100	ND	ug/kg	U
Benzofluoranthenes, Total		5	150	200	671	ug/kg	D
Benzo(a)pyrene	50-32-8	5	50.0	100	310	ug/kg	D
Indeno(1,2,3-cd)pyrene	193-39-5	5	100	100	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	100	100	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	100	100	ND	ug/kg	U
Pyridine	110-86-1	5	500	500	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	5	50.0	100	384	ug/kg	D
Surrogate: 2-Fluorophenol				*27-120 %*	*90.0*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*88.1*	*%*	
Surrogate: 2-Chlorophenol-d4				*31-120 %*	*90.8*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*32-120 %*	*84.7*	*%*	
Surrogate: Nitrobenzene-d5				*30-120 %*	*92.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:30

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 20:38

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*93.8*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*69.1*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*97.9*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 11/04/2024 12:30
Instrument: NT17 Analyst: JZ — Analyzed: 11/13/2024 23:38

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-01 A 02
Preparation Batch: BMK0278 — Sample Size: 10.7 g (wet) — Dry Weight:10.02 g
Prepared: 11/13/2024 — Final Volume: 0.5 mL — % Solids: 93.66

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	5	12.5	24.9	342	ug/kg	D
2-Methylnaphthalene	91-57-6	5	12.5	24.9	517	ug/kg	D
1-Methylnaphthalene	90-12-0	5	12.5	24.9	461	ug/kg	D
Acenaphthylene	208-96-8	5	12.5	24.9	141	ug/kg	D
Acenaphthene	83-32-9	5	12.5	24.9	3900	ug/kg	D, E
Dibenzofuran	132-64-9	5	12.5	24.9	1730	ug/kg	D
Fluorene	86-73-7	5	12.5	24.9	2740	ug/kg	D, E
Phenanthrene	85-01-8	5	12.5	24.9	3540	ug/kg	D, E
Anthracene	120-12-7	5	12.5	24.9	1480	ug/kg	D
Fluoranthene	206-44-0	5	12.5	24.9	8210	ug/kg	D, E
Pyrene	129-00-0	5	12.5	24.9	5050	ug/kg	D, E
Benzo(a)anthracene	56-55-3	5	12.5	24.9	1100	ug/kg	D
Chrysene	218-01-9	5	12.5	24.9	959	ug/kg	D
Benzo(b)fluoranthene	205-99-2	5	12.5	24.9	321	ug/kg	D
Benzo(k)fluoranthene	207-08-9	5	12.5	24.9	180	ug/kg	D
Benzo(j)fluoranthene	205-82-3	5	12.5	24.9	178	ug/kg	D
Benzofluoranthenes, Total		5	37.4	74.8	688	ug/kg	D
Benzo(a)pyrene	50-32-8	5	12.5	24.9	256	ug/kg	D
Indeno(1,2,3-cd)pyrene	193-39-5	5	12.5	24.9	59.6	ug/kg	D
Dibenzo(a,h)anthracene	53-70-3	5	12.5	24.9	19.4	ug/kg	J, D
Benzo(g,h,i)perylene	191-24-2	5	12.5	24.9	61.4	ug/kg	D
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*79.5*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*111*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*95.1*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 11/04/2024 12:30
Instrument: ECD7 Analyst: AA — Analyzed: 11/13/2024 20:28

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24K0069-01 A 03
	Preparation Batch: BMK0280	Sample Size: 5.38 g (wet)	Dry Weight:5.04 g
	Prepared: 11/13/2024	Final Volume: 5 mL	% Solids: 93.66
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0069-01 A 03
	Cleanup Batch: CMK0083	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24K0069-01 A 03
	Cleanup Batch: CMK0082	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	9.9	19.8	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	9.9	19.8	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	9.9	19.8	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	9.9	19.8	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	9.9	19.8	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	9.9	19.8	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	9.9	19.8	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.9	19.8	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.9	19.8	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*111*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*50.2*	*%*	*, P1
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*86.9*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*97.5*	*%*	P1

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 11/04/2024 12:30

Instrument: ICPMS1 Analyst: DOE — Analyzed: 11/07/2024 20:09

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-01 B 01

Preparation Batch: BMK0096 — Sample Size: 1.042 g (wet) — Dry Weight:0.99 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 95.04

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.20	3.09	mg/kg	
Cadmium	7440-43-9	20	0.03	0.10	0.08	mg/kg	J
Copper	7440-50-8	20	0.18	0.50	12.1	mg/kg	
Nickel	7440-02-0	20	0.22	0.50	27.0	mg/kg	
Selenium	7782-49-2	20	0.18	0.50	0.64	mg/kg	
Zinc	7440-66-6	20	2.9	6.1	34.6	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:30

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/12/2024 19:09

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-01 B

Preparation Batch: BMK0096 — Sample Size: 1.042 g (wet) — Dry Weight:0.99 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 95.04

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.10	0.20	ND	mg/kg	U
Barium	7440-39-3	20	0.12	0.50	40.5	mg/kg	
Beryllium	7440-41-7	20	0.02	0.20	0.15	mg/kg	J
Chromium	7440-47-3	100	1.31	2.52	21.3	mg/kg	D
Lead	7439-92-1	20	0.05	0.10	4.65	mg/kg	
Silver	7440-22-4	20	0.02	0.20	0.03	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 11/04/2024 12:30
Instrument: HYDRA Analyst: ML — Analyzed: 11/12/2024 13:39

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24K0069-01 B
Preparation Batch: BMK0105 — Sample Size: 0.273 g (wet) — Dry Weight:0.26 g
Prepared: 11/05/2024 — Final Volume: 50 mL — % Solids: 95.04

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00405	0.0193	0.0224	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01RE1 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 11/04/2024 12:30

Instrument: NT17 Analyst: JZ — Analyzed: 11/18/2024 14:40

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-01RE1 A 02

Preparation Batch: BMK0278 — Sample Size: 10.7 g (wet) — Dry Weight:10.02 g

Prepared: 11/13/2024 — Final Volume: 0.5 mL — % Solids: 93.66

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	50	125	249	340	ug/kg	D
2-Methylnaphthalene	91-57-6	50	125	249	452	ug/kg	D
1-Methylnaphthalene	90-12-0	50	125	249	411	ug/kg	D
Acenaphthylene	208-96-8	50	125	249	ND	ug/kg	U
Acenaphthene	83-32-9	50	125	249	3480	ug/kg	D
Dibenzofuran	132-64-9	50	125	249	1490	ug/kg	D
Fluorene	86-73-7	50	125	249	2220	ug/kg	D
Phenanthrene	85-01-8	50	125	249	3160	ug/kg	D
Anthracene	120-12-7	50	125	249	1160	ug/kg	D
Fluoranthene	206-44-0	50	125	249	7370	ug/kg	D
Pyrene	129-00-0	50	125	249	4240	ug/kg	D
Benzo(a)anthracene	56-55-3	50	125	249	897	ug/kg	D
Chrysene	218-01-9	50	125	249	837	ug/kg	D
Benzo(b)fluoranthene	205-99-2	50	125	249	245	ug/kg	J, D
Benzo(k)fluoranthene	207-08-9	50	125	249	169	ug/kg	J, D
Benzo(j)fluoranthene	205-82-3	50	125	249	154	ug/kg	J, D
Benzofluoranthenes, Total		50	374	748	566	ug/kg	J, D
Benzo(a)pyrene	50-32-8	50	125	249	208	ug/kg	J, D
Indeno(1,2,3-cd)pyrene	193-39-5	50	125	249	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	50	125	249	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	50	125	249	ND	ug/kg	U
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*		*D1*	D1
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*		*D1*	D1
Surrogate: Fluoranthene-d10				*36-134 %*		*D1*	D1

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01RE1 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 11/04/2024 12:30
Instrument: FID4 Analyst: NRB — Analyzed: 11/14/2024 11:29

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-01RE1 A 01
Preparation Batch: BMK0088 — Sample Size: 10 g (wet) — Dry Weight:9.37 g
Prepared: 11/07/2024 — Final Volume: 1 mL — % Solids: 93.66

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.34	221	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	10.7	177	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*98.1*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-F

24K0069-01RE1 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:30

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/11/2024 20:28

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-01RE1 B

Preparation Batch: BMK0096 — Sample Size: 1.042 g (wet) — Dry Weight:0.99 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 95.04

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Thallium	7440-28-0	20	0.02	0.20	0.03	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:35
Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 13:37

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24K0069-02 E
Preparation Batch: BMK0124 — Sample Size: 4.44 g (wet) — Dry Weight:4.12 g
Prepared: 11/06/2024 — Final Volume: 5 mL — % Solids: 92.90

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.61	1.21	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.61	1.21	ND	ug/kg	U
Bromomethane	74-83-9	1	2.42	2.42	ND	ug/kg	U
Chloroethane	75-00-3	1	2.42	2.42	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.21	2.42	ND	ug/kg	U
Acrolein	107-02-8	1	3.03	6.06	4.10	ug/kg	J
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.21	2.42	ND	ug/kg	U
Acetone	67-64-1	1	12.1	12.1	54.2	ug/kg	B
1,1-Dichloroethene	75-35-4	1	0.61	1.21	ND	ug/kg	U
Iodomethane	74-88-4	1	1.21	1.21	ND	ug/kg	U
Methylene Chloride	75-09-2	1	6.06	6.06	ND	ug/kg	U
Acrylonitrile	107-13-1	1	6.06	6.06	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.21	1.21	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	1.21	1.21	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	6.06	6.06	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.61	1.21	ND	ug/kg	U
2-Butanone	78-93-3	1	3.03	6.06	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.61	1.21	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.61	1.21	ND	ug/kg	U
Chloroform	67-66-3	1	0.61	1.21	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.61	1.21	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.21	1.21	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.61	1.21	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.61	1.21	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.61	1.21	ND	ug/kg	U
Benzene	71-43-2	1	0.61	1.21	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.61	1.21	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.61	1.21	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.61	1.21	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.61	1.21	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	6.06	6.06	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	3.03	6.06	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.61	1.21	ND	ug/kg	U
Toluene	108-88-3	1	0.61	1.21	ND	ug/kg	U
trans-1,3-Dichloropropene	10061-02-6	1	0.61	1.21	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:35

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 13:37

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	3.03	6.06	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.61	1.21	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.61	1.21	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.61	1.21	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.61	1.21	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.61	1.21	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.61	1.21	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.61	1.21	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.61	1.21	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.21	2.42	ND	ug/kg	U
o-Xylene	95-47-6	1	0.61	1.21	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.21	2.42	ND	ug/kg	U
Styrene	100-42-5	1	0.61	1.21	ND	ug/kg	U
Bromoform	75-25-2	1	0.61	1.21	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.61	1.21	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.42	2.42	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	6.06	6.06	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.61	1.21	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.61	1.21	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.61	1.21	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.61	1.21	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.61	1.21	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.61	1.21	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.61	1.21	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.61	1.21	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.61	1.21	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.61	1.21	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.61	1.21	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.61	1.21	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.61	1.21	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.21	1.21	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	3.03	6.06	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	3.03	6.06	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	6.06	6.06	ND	ug/kg	U
Naphthalene	91-20-3	1	3.03	6.06	21.6	ug/kg	
1,2,3-Trichlorobenzene	87-61-6	1	3.03	6.06	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.61	1.21	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.61	1.21	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:35

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 13:37

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	3.03	6.06	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*123*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*102*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*104*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 11/04/2024 12:35
Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 18:55

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24K0069-02 C
Preparation Batch: BMK0093 — Sample Size: 4.815 g (wet) — Dry Weight:4.47 g
Prepared: 11/05/2024 — Final Volume: 5 mL — % Solids: 92.90

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	5970	14500	ug/kg	
HC ID: GRO						
Surrogate: Toluene-d8			*80-120 %*	*98.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*98.6*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:35
Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 21:16

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-02 A 04
Preparation Batch: BMK0281 — Sample Size: 10.74 g (wet) — Dry Weight:9.98 g
Prepared: 11/13/2024 — Final Volume: 1 mL — % Solids: 92.90

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	5	50.1	100	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	5	175	251	ND	ug/kg	U
2-Chlorophenol	95-57-8	5	100	100	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	5	50.1	100	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	5	50.1	100	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	5	50.1	100	ND	ug/kg	U
Benzyl Alcohol	100-51-6	5	100	100	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	5	50.1	100	ND	ug/kg	U
2-Methylphenol	95-48-7	5	50.1	100	ND	ug/kg	U
Hexachloroethane	67-72-1	5	50.1	100	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	5	75.2	100	ND	ug/kg	U
4-Methylphenol	106-44-5	5	75.2	100	ND	ug/kg	U
Nitrobenzene	98-95-3	5	50.1	100	ND	ug/kg	U
Isophorone	78-59-1	5	75.2	100	ND	ug/kg	U
2-Nitrophenol	88-75-5	5	50.1	100	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	5	251	501	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	5	50.1	100	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	5	251	501	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	5	50.1	100	ND	ug/kg	U
Naphthalene	91-20-3	5	50.1	100	307	ug/kg	D
Benzoic acid	65-85-0	5	501	1000	ND	ug/kg	U
4-Chloroaniline	106-47-8	5	251	501	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	5	50.1	100	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	5	251	501	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	5	50.1	100	233	ug/kg	D
Hexachlorocyclopentadiene	77-47-4	5	251	501	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	5	251	501	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	5	251	501	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	5	50.1	100	ND	ug/kg	U
2-Nitroaniline	88-74-4	5	251	501	ND	ug/kg	U
Acenaphthylene	208-96-8	5	50.1	100	ND	ug/kg	U
Dimethylphthalate	131-11-3	5	50.1	100	ND	ug/kg	U
2,6-Dinitrotoluene	606-20-2	5	251	501	ND	ug/kg	U
Acenaphthene	83-32-9	5	50.1	100	1200	ug/kg	D
3-Nitroaniline	99-09-2	5	251	501	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:35

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 21:16

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	5	501	1000	ND	ug/kg	U
Dibenzofuran	132-64-9	5	100	100	477	ug/kg	D
4-Nitrophenol	100-02-7	5	251	501	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	5	251	501	ND	ug/kg	U
Fluorene	86-73-7	5	100	100	563	ug/kg	D
4-Chlorophenylphenyl ether	7005-72-3	5	175	251	ND	ug/kg	U
Diethyl phthalate	84-66-2	5	175	251	ND	ug/kg	U
4-Nitroaniline	100-01-6	5	251	501	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	5	501	1000	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	5	50.1	100	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	5	100	100	ND	ug/kg	U
Hexachlorobenzene	118-74-1	5	100	100	ND	ug/kg	U
Pentachlorophenol	87-86-5	5	251	501	ND	ug/kg	U
Phenanthrene	85-01-8	5	50.1	100	1150	ug/kg	D
Anthracene	120-12-7	5	50.1	100	308	ug/kg	D
Carbazole	86-74-8	5	50.1	100	99.8	ug/kg	J, D
Di-n-Butylphthalate	84-74-2	5	50.1	100	ND	ug/kg	U
Fluoranthene	206-44-0	5	50.1	100	2150	ug/kg	D
Pyrene	129-00-0	5	50.1	100	1300	ug/kg	D
Butylbenzylphthalate	85-68-7	5	50.1	100	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	5	50.1	100	267	ug/kg	D
3,3'-Dichlorobenzidine	91-94-1	5	251	501	ND	ug/kg	U
Chrysene	218-01-9	5	50.1	100	265	ug/kg	D
bis(2-Ethylhexyl)phthalate	117-81-7	5	200	251	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	5	50.1	100	ND	ug/kg	U
Benzofluoranthenes, Total		5	150	200	181	ug/kg	J, D
Benzo(a)pyrene	50-32-8	5	50.1	100	83.8	ug/kg	J, D
Indeno(1,2,3-cd)pyrene	193-39-5	5	100	100	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	100	100	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	100	100	ND	ug/kg	U
Pyridine	110-86-1	5	501	501	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	5	50.1	100	179	ug/kg	D
Surrogate: 2-Fluorophenol				*27-120 %*	*103*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*98.6*	*%*	
Surrogate: 2-Chlorophenol-d4				*31-120 %*	*102*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*32-120 %*	*97.0*	*%*	
Surrogate: Nitrobenzene-d5				*30-120 %*	*103*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:35

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 21:16

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*101*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*75.1*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*101*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 11/04/2024 12:35
Instrument: NT17 Analyst: JZ — Analyzed: 11/14/2024 00:08

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-02 A 02
Preparation Batch: BMK0278 — Sample Size: 10.78 g (wet) — Dry Weight:10.01 g
Prepared: 11/13/2024 — Final Volume: 0.5 mL — % Solids: 92.90

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	5	12.5	25.0	277	ug/kg	D
2-Methylnaphthalene	91-57-6	5	12.5	25.0	236	ug/kg	D
1-Methylnaphthalene	90-12-0	5	12.5	25.0	149	ug/kg	D
Acenaphthylene	208-96-8	5	12.5	25.0	21.0	ug/kg	J, D
Acenaphthene	83-32-9	5	12.5	25.0	729	ug/kg	D
Dibenzofuran	132-64-9	5	12.5	25.0	381	ug/kg	D
Fluorene	86-73-7	5	12.5	25.0	403	ug/kg	D
Phenanthrene	85-01-8	5	12.5	25.0	673	ug/kg	D
Anthracene	120-12-7	5	12.5	25.0	229	ug/kg	D
Fluoranthene	206-44-0	5	12.5	25.0	1350	ug/kg	D
Pyrene	129-00-0	5	12.5	25.0	840	ug/kg	D
Benzo(a)anthracene	56-55-3	5	12.5	25.0	181	ug/kg	D
Chrysene	218-01-9	5	12.5	25.0	160	ug/kg	D
Benzo(b)fluoranthene	205-99-2	5	12.5	25.0	58.4	ug/kg	D
Benzo(k)fluoranthene	207-08-9	5	12.5	25.0	34.0	ug/kg	D
Benzo(j)fluoranthene	205-82-3	5	12.5	25.0	35.0	ug/kg	D
Benzofluoranthenes, Total		5	37.4	74.9	132	ug/kg	D
Benzo(a)pyrene	50-32-8	5	12.5	25.0	50.3	ug/kg	D
Indeno(1,2,3-cd)pyrene	193-39-5	5	12.5	25.0	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	12.5	25.0	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	12.5	25.0	15.8	ug/kg	J, D
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*66.8*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*88.5*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*73.3*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 11/04/2024 12:35
Instrument: ECD7 Analyst: AA — Analyzed: 11/13/2024 20:49

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24K0069-02 A 03
	Preparation Batch: BMK0280	Sample Size: 5.38 g (wet)	Dry Weight:5.00 g
	Prepared: 11/13/2024	Final Volume: 5 mL	% Solids: 92.90
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0069-02 A 03
	Cleanup Batch: CMK0083	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24K0069-02 A 03
	Cleanup Batch: CMK0082	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	50.0	100	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	50.0	100	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	50.0	100	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	50.0	100	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	50.0	100	ND	ug/kg	U
Aroclor 1254	11097-69-1	5	50.0	100	ND	ug/kg	U
Aroclor 1260	11096-82-5	5	50.0	100	ND	ug/kg	U
Aroclor 1262	37324-23-5	5	50.0	100	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	50.0	100	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*114*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*96.8*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*104*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*128*	*%*	*

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 11/04/2024 12:35
Instrument: ICPMS1 Analyst: DOE — Analyzed: 11/07/2024 20:48

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-02 B 01
Preparation Batch: BMK0096 — Sample Size: 1.014 g (wet) — Dry Weight:0.94 g
Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 92.96

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.21	4.92	mg/kg	
Cadmium	7440-43-9	20	0.03	0.11	0.06	mg/kg	J
Copper	7440-50-8	20	0.18	0.53	16.0	mg/kg	
Nickel	7440-02-0	20	0.08	0.53	34.4	mg/kg	
Selenium	7782-49-2	20	0.19	0.53	0.60	mg/kg	
Zinc	7440-66-6	20	3.1	6.4	41.7	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:35
Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/12/2024 19:56

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-02 B
Preparation Batch: BMK0096 — Sample Size: 1.014 g (wet) — Dry Weight:0.94 g
Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 92.96

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.11	0.21	ND	mg/kg	U
Barium	7440-39-3	20	0.12	0.53	42.9	mg/kg	
Beryllium	7440-41-7	20	0.02	0.21	0.24	mg/kg	
Chromium	7440-47-3	100	1.38	2.65	25.9	mg/kg	D
Lead	7439-92-1	20	0.06	0.11	4.26	mg/kg	
Silver	7440-22-4	20	0.02	0.21	0.03	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 11/04/2024 12:35
Instrument: HYDRA Analyst: ML — Analyzed: 11/12/2024 13:48

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24K0069-02 B
Preparation Batch: BMK0105 — Sample Size: 0.218 g (wet) — Dry Weight:0.20 g
Prepared: 11/05/2024 — Final Volume: 50 mL — % Solids: 92.96

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00518	0.0247	0.0225	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02RE1 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 11/04/2024 12:35
Instrument: FID4 Analyst: NRB — Analyzed: 11/14/2024 11:49

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-02RE1 A 01
Preparation Batch: BMK0088 — Sample Size: 10 g (wet) — Dry Weight:9.29 g
Prepared: 11/07/2024 — Final Volume: 1 mL — % Solids: 92.90

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.38	49.0	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	10.8	132	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*112*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-G

24K0069-02RE1 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:35

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/11/2024 20:04

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-02RE1 B

Preparation Batch: BMK0096 — Sample Size: 1.014 g (wet) — Dry Weight:0.94 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 92.96

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Thallium	7440-28-0	20	0.03	0.21	0.03	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:40
Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 14:02

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24K0069-03 E
Preparation Batch: BMK0124 — Sample Size: 4.07 g (wet) — Dry Weight:3.77 g
Prepared: 11/06/2024 — Final Volume: 5 mL — % Solids: 92.73

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.66	1.32	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.66	1.32	ND	ug/kg	U
Bromomethane	74-83-9	1	2.65	2.65	ND	ug/kg	U
Chloroethane	75-00-3	1	2.65	2.65	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.32	2.65	ND	ug/kg	U
Acrolein	107-02-8	1	3.31	6.62	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.32	2.65	ND	ug/kg	U
Acetone	67-64-1	1	13.2	13.2	87.3	ug/kg	B
1,1-Dichloroethene	75-35-4	1	0.66	1.32	ND	ug/kg	U
Iodomethane	74-88-4	1	1.32	1.32	ND	ug/kg	U
Methylene Chloride	75-09-2	1	6.62	6.62	ND	ug/kg	U
Acrylonitrile	107-13-1	1	6.62	6.62	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.32	1.32	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	1.32	1.32	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	6.62	6.62	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.66	1.32	ND	ug/kg	U
2-Butanone	78-93-3	1	3.31	6.62	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.66	1.32	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.66	1.32	ND	ug/kg	U
Chloroform	67-66-3	1	0.66	1.32	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.66	1.32	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.32	1.32	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.66	1.32	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.66	1.32	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.66	1.32	ND	ug/kg	U
Benzene	71-43-2	1	0.66	1.32	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.66	1.32	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.66	1.32	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.66	1.32	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.66	1.32	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	6.62	6.62	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	3.31	6.62	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.66	1.32	ND	ug/kg	U
Toluene	108-88-3	1	0.66	1.32	ND	ug/kg	U
trans-1,3-Dichloropropene	10061-02-6	1	0.66	1.32	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:40

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 14:02

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	3.31	6.62	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.66	1.32	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.66	1.32	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.66	1.32	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.66	1.32	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.66	1.32	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.66	1.32	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.66	1.32	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.66	1.32	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.32	2.65	ND	ug/kg	U
o-Xylene	95-47-6	1	0.66	1.32	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.32	2.65	ND	ug/kg	U
Styrene	100-42-5	1	0.66	1.32	ND	ug/kg	U
Bromoform	75-25-2	1	0.66	1.32	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.66	1.32	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.65	2.65	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	6.62	6.62	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.66	1.32	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.66	1.32	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.66	1.32	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.66	1.32	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.66	1.32	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.66	1.32	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.66	1.32	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.66	1.32	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.66	1.32	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.66	1.32	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.66	1.32	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.66	1.32	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.66	1.32	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.32	1.32	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	3.31	6.62	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	3.31	6.62	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	6.62	6.62	ND	ug/kg	U
Naphthalene	91-20-3	1	3.31	6.62	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	3.31	6.62	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.66	1.32	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.66	1.32	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:40

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 14:02

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	3.31	6.62	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*123*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*100*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*104*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*102*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 11/04/2024 12:40
Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 19:18

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24K0069-03 C
Preparation Batch: BMK0093 — Sample Size: 5.016 g (wet) — Dry Weight:4.65 g
Prepared: 11/05/2024 — Final Volume: 5 mL — % Solids: 92.73

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	5770	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*99.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*98.1*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:40
Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 21:54

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-03 A 04
Preparation Batch: BMK0281 — Sample Size: 10.78 g (wet) — Dry Weight:10.00 g
Prepared: 11/13/2024 — Final Volume: 1 mL — % Solids: 92.73

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	5	50.0	100	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	5	175	250	ND	ug/kg	U
2-Chlorophenol	95-57-8	5	100	100	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	5	50.0	100	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	5	50.0	100	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	5	50.0	100	ND	ug/kg	U
Benzyl Alcohol	100-51-6	5	100	100	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	5	50.0	100	ND	ug/kg	U
2-Methylphenol	95-48-7	5	50.0	100	ND	ug/kg	U
Hexachloroethane	67-72-1	5	50.0	100	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	5	75.0	100	ND	ug/kg	U
4-Methylphenol	106-44-5	5	75.0	100	ND	ug/kg	U
Nitrobenzene	98-95-3	5	50.0	100	ND	ug/kg	U
Isophorone	78-59-1	5	75.0	100	ND	ug/kg	U
2-Nitrophenol	88-75-5	5	50.0	100	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	5	250	500	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	5	50.0	100	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	5	250	500	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	5	50.0	100	ND	ug/kg	U
Naphthalene	91-20-3	5	50.0	100	92.9	ug/kg	J, D
Benzoic acid	65-85-0	5	500	1000	ND	ug/kg	U
4-Chloroaniline	106-47-8	5	250	500	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	5	50.0	100	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	5	250	500	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	5	50.0	100	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	5	250	500	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	5	250	500	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	5	250	500	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	5	50.0	100	ND	ug/kg	U
2-Nitroaniline	88-74-4	5	250	500	ND	ug/kg	U
Acenaphthylene	208-96-8	5	50.0	100	ND	ug/kg	U
Dimethylphthalate	131-11-3	5	50.0	100	ND	ug/kg	U
2,6-Dinitrotoluene	606-20-2	5	250	500	ND	ug/kg	U
Acenaphthene	83-32-9	5	50.0	100	76.5	ug/kg	J, D
3-Nitroaniline	99-09-2	5	250	500	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:40

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 21:54

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	5	500	1000	ND	ug/kg	U
Dibenzofuran	132-64-9	5	100	100	145	ug/kg	D
4-Nitrophenol	100-02-7	5	250	500	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	5	250	500	ND	ug/kg	U
Fluorene	86-73-7	5	100	100	225	ug/kg	D
4-Chlorophenylphenyl ether	7005-72-3	5	175	250	ND	ug/kg	U
Diethyl phthalate	84-66-2	5	175	250	ND	ug/kg	U
4-Nitroaniline	100-01-6	5	250	500	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	5	500	1000	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	5	50.0	100	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	5	100	100	ND	ug/kg	U
Hexachlorobenzene	118-74-1	5	100	100	ND	ug/kg	U
Pentachlorophenol	87-86-5	5	250	500	ND	ug/kg	U
Phenanthrene	85-01-8	5	50.0	100	1210	ug/kg	D
Anthracene	120-12-7	5	50.0	100	97.4	ug/kg	J, D
Carbazole	86-74-8	5	50.0	100	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	5	50.0	100	ND	ug/kg	U
Fluoranthene	206-44-0	5	50.0	100	2240	ug/kg	D
Pyrene	129-00-0	5	50.0	100	1560	ug/kg	D
Butylbenzylphthalate	85-68-7	5	50.0	100	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	5	50.0	100	276	ug/kg	D
3,3'-Dichlorobenzidine	91-94-1	5	250	500	ND	ug/kg	U
Chrysene	218-01-9	5	50.0	100	507	ug/kg	D
bis(2-Ethylhexyl)phthalate	117-81-7	5	200	250	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	5	50.0	100	ND	ug/kg	U
Benzofluoranthenes, Total		5	150	200	227	ug/kg	D
Benzo(a)pyrene	50-32-8	5	50.0	100	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	5	100	100	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	100	100	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	100	100	ND	ug/kg	U
Pyridine	110-86-1	5	500	500	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	5	50.0	100	ND	ug/kg	U
Surrogate: 2-Fluorophenol				*27-120 %*	*97.9*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*94.7*	*%*	
Surrogate: 2-Chlorophenol-d4				*31-120 %*	*97.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*32-120 %*	*88.8*	*%*	
Surrogate: Nitrobenzene-d5				*30-120 %*	*99.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:40

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 21:54

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*97.8*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*79.6*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*105*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 11/04/2024 12:40
Instrument: NT17 Analyst: JZ — Analyzed: 11/14/2024 20:00

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-03 A 02
Preparation Batch: BMK0278 — Sample Size: 10.78 g (wet) — Dry Weight:10.00 g
Prepared: 11/13/2024 — Final Volume: 0.5 mL — % Solids: 92.73

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	2.50	5.00	69.7	ug/kg	
2-Methylnaphthalene	91-57-6	1	2.50	5.00	29.9	ug/kg	
1-Methylnaphthalene	90-12-0	1	2.50	5.00	21.0	ug/kg	
Acenaphthylene	208-96-8	1	2.50	5.00	13.9	ug/kg	
Acenaphthene	83-32-9	1	2.50	5.00	47.6	ug/kg	
Dibenzofuran	132-64-9	1	2.50	5.00	126	ug/kg	
Fluorene	86-73-7	1	2.50	5.00	139	ug/kg	
Phenanthrene	85-01-8	1	2.50	5.00	398	ug/kg	
Anthracene	120-12-7	1	2.50	5.00	60.5	ug/kg	
Fluoranthene	206-44-0	1	2.50	5.00	1280	ug/kg	E
Pyrene	129-00-0	1	2.50	5.00	897	ug/kg	E
Benzo(a)anthracene	56-55-3	1	2.50	5.00	152	ug/kg	
Chrysene	218-01-9	1	2.50	5.00	188	ug/kg	
Benzo(b)fluoranthene	205-99-2	1	2.50	5.00	70.9	ug/kg	
Benzo(k)fluoranthene	207-08-9	1	2.50	5.00	44.5	ug/kg	
Benzo(j)fluoranthene	205-82-3	1	2.50	5.00	45.2	ug/kg	
Benzofluoranthenes, Total		1	7.50	15.0	161	ug/kg	
Benzo(a)pyrene	50-32-8	1	2.50	5.00	25.9	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	2.50	5.00	12.9	ug/kg	
Dibenzo(a,h)anthracene	53-70-3	1	2.50	5.00	3.21	ug/kg	J
Benzo(g,h,i)perylene	191-24-2	1	2.50	5.00	12.5	ug/kg	Q
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*66.5*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*65.9*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*83.7*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 11/04/2024 12:40
Instrument: ECD7 Analyst: AA — Analyzed: 11/13/2024 21:10

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24K0069-03 A 03
	Preparation Batch: BMK0280	Sample Size: 5.4 g (wet)	Dry Weight:5.01 g
	Prepared: 11/13/2024	Final Volume: 5 mL	% Solids: 92.73
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0069-03 A 03
	Cleanup Batch: CMK0083	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24K0069-03 A 03
	Cleanup Batch: CMK0082	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	10.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	10.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	10.0	20.0	58.0	ug/kg	
Aroclor 1248	12672-29-6	1	10.0	20.0	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	10.0	20.0	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	10.0	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*112*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*83.1*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*92.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*98.1*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 11/04/2024 12:40

Instrument: ICPMS1 Analyst: DOE — Analyzed: 11/07/2024 20:53

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-03 B 01

Preparation Batch: BMK0096 — Sample Size: 1.076 g (wet) — Dry Weight:1.00 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 93.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.20	3.93	mg/kg	
Cadmium	7440-43-9	20	0.03	0.10	0.06	mg/kg	J
Copper	7440-50-8	20	0.17	0.50	12.0	mg/kg	
Nickel	7440-02-0	20	0.08	0.50	30.6	mg/kg	
Selenium	7782-49-2	20	0.18	0.50	0.48	mg/kg	J
Zinc	7440-66-6	20	2.9	6.0	35.2	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:40

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/12/2024 20:00

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-03 B

Preparation Batch: BMK0096 — Sample Size: 1.076 g (wet) — Dry Weight:1.00 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 93.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.10	0.20	ND	mg/kg	U
Barium	7440-39-3	20	0.11	0.50	35.3	mg/kg	
Beryllium	7440-41-7	20	0.02	0.20	0.16	mg/kg	J
Chromium	7440-47-3	100	1.29	2.49	23.6	mg/kg	D
Lead	7439-92-1	20	0.05	0.10	9.52	mg/kg	
Silver	7440-22-4	20	0.02	0.20	0.03	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 11/04/2024 12:40
Instrument: HYDRA Analyst: ML — Analyzed: 11/12/2024 13:50

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24K0069-03 B
Preparation Batch: BMK0105 — Sample Size: 0.219 g (wet) — Dry Weight:0.20 g
Prepared: 11/05/2024 — Final Volume: 50 mL — % Solids: 93.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00513	0.0244	0.0276	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03RE1 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 11/04/2024 12:40

Instrument: NT17 Analyst: JZ — Analyzed: 11/18/2024 15:15

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-03RE1 A 02

Preparation Batch: BMK0278 — Sample Size: 10.78 g (wet) — Dry Weight:10.00 g

Prepared: 11/13/2024 — Final Volume: 0.5 mL — % Solids: 92.73

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	5	12.5	25.0	72.6	ug/kg	D
2-Methylnaphthalene	91-57-6	5	12.5	25.0	30.7	ug/kg	D
1-Methylnaphthalene	90-12-0	5	12.5	25.0	21.7	ug/kg	J, D
Acenaphthylene	208-96-8	5	12.5	25.0	ND	ug/kg	U
Acenaphthene	83-32-9	5	12.5	25.0	46.7	ug/kg	D
Dibenzofuran	132-64-9	5	12.5	25.0	123	ug/kg	D
Fluorene	86-73-7	5	12.5	25.0	129	ug/kg	D
Phenanthrene	85-01-8	5	12.5	25.0	387	ug/kg	D
Anthracene	120-12-7	5	12.5	25.0	49.0	ug/kg	D
Fluoranthene	206-44-0	5	12.5	25.0	1110	ug/kg	D
Pyrene	129-00-0	5	12.5	25.0	772	ug/kg	D
Benzo(a)anthracene	56-55-3	5	12.5	25.0	142	ug/kg	D
Chrysene	218-01-9	5	12.5	25.0	181	ug/kg	D
Benzo(b)fluoranthene	205-99-2	5	12.5	25.0	64.0	ug/kg	D
Benzo(k)fluoranthene	207-08-9	5	12.5	25.0	37.8	ug/kg	D
Benzo(j)fluoranthene	205-82-3	5	12.5	25.0	40.2	ug/kg	D
Benzofluoranthenes, Total		5	37.5	75.0	142	ug/kg	D
Benzo(a)pyrene	50-32-8	5	12.5	25.0	24.5	ug/kg	J, D
Indeno(1,2,3-cd)pyrene	193-39-5	5	12.5	25.0	23.7	ug/kg	J, D
Dibenzo(a,h)anthracene	53-70-3	5	12.5	25.0	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	12.5	25.0	28.6	ug/kg	D
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*65.5*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*106*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*70.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03RE1 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 11/04/2024 12:40
Instrument: FID4 Analyst: NRB — Analyzed: 11/14/2024 12:09

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-03RE1 A 01
Preparation Batch: BMK0088 — Sample Size: 10 g (wet) — Dry Weight:9.27 g
Prepared: 11/07/2024 — Final Volume: 1 mL — % Solids: 92.73

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.39	52.9	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	10.8	98.6	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*117*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-H

24K0069-03RE1 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:40

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/11/2024 20:09

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-03RE1 B

Preparation Batch: BMK0096 — Sample Size: 1.076 g (wet) — Dry Weight:1.00 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 93.38

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Thallium	7440-28-0	20	0.02	0.20	0.03	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:45
Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 14:26

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24K0069-04 E
Preparation Batch: BMK0124 — Sample Size: 4.81 g (wet) — Dry Weight:4.29 g
Prepared: 11/06/2024 — Final Volume: 5 mL — % Solids: 89.16

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.58	1.17	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.58	1.17	ND	ug/kg	U
Bromomethane	74-83-9	1	2.33	2.33	ND	ug/kg	U
Chloroethane	75-00-3	1	2.33	2.33	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.17	2.33	ND	ug/kg	U
Acrolein	107-02-8	1	2.91	5.83	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.17	2.33	ND	ug/kg	U
Acetone	67-64-1	1	11.7	11.7	47.0	ug/kg	B
1,1-Dichloroethene	75-35-4	1	0.58	1.17	ND	ug/kg	U
Iodomethane	74-88-4	1	1.17	1.17	ND	ug/kg	U
Methylene Chloride	75-09-2	1	5.83	5.83	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.83	5.83	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.17	1.17	1.22	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.17	1.17	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.83	5.83	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.58	1.17	ND	ug/kg	U
2-Butanone	78-93-3	1	2.91	5.83	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.58	1.17	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.58	1.17	ND	ug/kg	U
Chloroform	67-66-3	1	0.58	1.17	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.58	1.17	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.17	1.17	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.58	1.17	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.58	1.17	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.58	1.17	ND	ug/kg	U
Benzene	71-43-2	1	0.58	1.17	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.58	1.17	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.58	1.17	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.58	1.17	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.58	1.17	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.83	5.83	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.91	5.83	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.58	1.17	ND	ug/kg	U
Toluene	108-88-3	1	0.58	1.17	ND	ug/kg	U
trans-1,3-Dichloropropene	10061-02-6	1	0.58	1.17	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:45

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 14:26

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.91	5.83	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.58	1.17	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.58	1.17	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.58	1.17	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.58	1.17	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.58	1.17	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.58	1.17	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.58	1.17	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.58	1.17	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.17	2.33	ND	ug/kg	U
o-Xylene	95-47-6	1	0.58	1.17	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.17	2.33	ND	ug/kg	U
Styrene	100-42-5	1	0.58	1.17	ND	ug/kg	U
Bromoform	75-25-2	1	0.58	1.17	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.58	1.17	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.33	2.33	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.83	5.83	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.58	1.17	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.58	1.17	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.58	1.17	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.58	1.17	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.58	1.17	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.58	1.17	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.58	1.17	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.58	1.17	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.58	1.17	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.58	1.17	0.78	ug/kg	J
1,3-Dichlorobenzene	541-73-1	1	0.58	1.17	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.58	1.17	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.58	1.17	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.17	1.17	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.91	5.83	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.91	5.83	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.83	5.83	ND	ug/kg	U
Naphthalene	91-20-3	1	2.91	5.83	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	2.91	5.83	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.58	1.17	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.58	1.17	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:45

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 14:26

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.91	5.83	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*123*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*101*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*103*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*105*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 11/04/2024 12:45
Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 19:41

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24K0069-04 C
Preparation Batch: BMK0093 — Sample Size: 4.337 g (wet) — Dry Weight:3.87 g
Prepared: 11/05/2024 — Final Volume: 5 mL — % Solids: 89.16

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	7070	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*98.8*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*97.8*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:45

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 22:32

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-04 A 04

Preparation Batch: BMK0281 — Sample Size: 11.22 g (wet) — Dry Weight:10.00 g

Prepared: 11/13/2024 — Final Volume: 1 mL — % Solids: 89.16

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	5	50.0	100	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	5	175	250	ND	ug/kg	U
2-Chlorophenol	95-57-8	5	100	100	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	5	50.0	100	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	5	50.0	100	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	5	50.0	100	ND	ug/kg	U
Benzyl Alcohol	100-51-6	5	100	100	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	5	50.0	100	ND	ug/kg	U
2-Methylphenol	95-48-7	5	50.0	100	ND	ug/kg	U
Hexachloroethane	67-72-1	5	50.0	100	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	5	75.0	100	ND	ug/kg	U
4-Methylphenol	106-44-5	5	75.0	100	ND	ug/kg	U
Nitrobenzene	98-95-3	5	50.0	100	ND	ug/kg	U
Isophorone	78-59-1	5	75.0	100	ND	ug/kg	U
2-Nitrophenol	88-75-5	5	50.0	100	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	5	250	500	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	5	50.0	100	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	5	250	500	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	5	50.0	100	ND	ug/kg	U
Naphthalene	91-20-3	5	50.0	100	71.4	ug/kg	J, D
Benzoic acid	65-85-0	5	500	1000	ND	ug/kg	U
4-Chloroaniline	106-47-8	5	250	500	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	5	50.0	100	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	5	250	500	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	5	50.0	100	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	5	250	500	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	5	250	500	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	5	250	500	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	5	50.0	100	ND	ug/kg	U
2-Nitroaniline	88-74-4	5	250	500	ND	ug/kg	U
Acenaphthylene	208-96-8	5	50.0	100	ND	ug/kg	U
Dimethylphthalate	131-11-3	5	50.0	100	ND	ug/kg	U
2,6-Dinitrotoluene	606-20-2	5	250	500	ND	ug/kg	U
Acenaphthene	83-32-9	5	50.0	100	ND	ug/kg	U
3-Nitroaniline	99-09-2	5	250	500	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:45

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 22:32

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	5	500	1000	ND	ug/kg	U
Dibenzofuran	132-64-9	5	100	100	ND	ug/kg	U
4-Nitrophenol	100-02-7	5	250	500	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	5	250	500	ND	ug/kg	U
Fluorene	86-73-7	5	100	100	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	5	175	250	ND	ug/kg	U
Diethyl phthalate	84-66-2	5	175	250	ND	ug/kg	U
4-Nitroaniline	100-01-6	5	250	500	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	5	500	1000	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	5	50.0	100	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	5	100	100	ND	ug/kg	U
Hexachlorobenzene	118-74-1	5	100	100	ND	ug/kg	U
Pentachlorophenol	87-86-5	5	250	500	ND	ug/kg	U
Phenanthrene	85-01-8	5	50.0	100	105	ug/kg	D
Anthracene	120-12-7	5	50.0	100	ND	ug/kg	U
Carbazole	86-74-8	5	50.0	100	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	5	50.0	100	ND	ug/kg	U
Fluoranthene	206-44-0	5	50.0	100	152	ug/kg	D
Pyrene	129-00-0	5	50.0	100	143	ug/kg	D
Butylbenzylphthalate	85-68-7	5	50.0	100	100	ug/kg	D
Benzo(a)anthracene	56-55-3	5	50.0	100	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	5	250	500	ND	ug/kg	U
Chrysene	218-01-9	5	50.0	100	59.8	ug/kg	J, D
bis(2-Ethylhexyl)phthalate	117-81-7	5	200	250	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	5	50.0	100	ND	ug/kg	U
Benzofluoranthenes, Total		5	150	200	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	5	50.0	100	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	5	100	100	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	100	100	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	100	100	ND	ug/kg	U
Pyridine	110-86-1	5	500	500	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	5	50.0	100	ND	ug/kg	U
Surrogate: 2-Fluorophenol				*27-120 %*	*89.0*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*86.9*	*%*	
Surrogate: 2-Chlorophenol-d4				*31-120 %*	*91.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*32-120 %*	*86.7*	*%*	
Surrogate: Nitrobenzene-d5				*30-120 %*	*95.0*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:45

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 22:32

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*91.2*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*79.3*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*101*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 11/04/2024 12:45
Instrument: NT17 Analyst: JZ — Analyzed: 11/14/2024 20:30

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-04 A 02
Preparation Batch: BMK0278 — Sample Size: 11.22 g (wet) — Dry Weight:10.00 g
Prepared: 11/13/2024 — Final Volume: 0.5 mL — % Solids: 89.16

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	2.50	5.00	135	ug/kg	
2-Methylnaphthalene	91-57-6	1	2.50	5.00	36.7	ug/kg	
1-Methylnaphthalene	90-12-0	1	2.50	5.00	23.3	ug/kg	
Acenaphthylene	208-96-8	1	2.50	5.00	22.6	ug/kg	
Acenaphthene	83-32-9	1	2.50	5.00	37.0	ug/kg	
Dibenzofuran	132-64-9	1	2.50	5.00	35.3	ug/kg	
Fluorene	86-73-7	1	2.50	5.00	34.1	ug/kg	
Phenanthrene	85-01-8	1	2.50	5.00	136	ug/kg	
Anthracene	120-12-7	1	2.50	5.00	19.4	ug/kg	
Fluoranthene	206-44-0	1	2.50	5.00	145	ug/kg	
Pyrene	129-00-0	1	2.50	5.00	118	ug/kg	
Benzo(a)anthracene	56-55-3	1	2.50	5.00	25.8	ug/kg	
Chrysene	218-01-9	1	2.50	5.00	39.1	ug/kg	
Benzo(b)fluoranthene	205-99-2	1	2.50	5.00	25.2	ug/kg	
Benzo(k)fluoranthene	207-08-9	1	2.50	5.00	16.3	ug/kg	
Benzo(j)fluoranthene	205-82-3	1	2.50	5.00	16.2	ug/kg	
Benzofluoranthenes, Total		1	7.50	15.0	57.2	ug/kg	
Benzo(a)pyrene	50-32-8	1	2.50	5.00	26.9	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	2.50	5.00	8.12	ug/kg	
Dibenzo(a,h)anthracene	53-70-3	1	2.50	5.00	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	2.50	5.00	9.72	ug/kg	Q
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*62.7*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*49.6*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*78.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 11/04/2024 12:45
Instrument: ECD7 Analyst: AA — Analyzed: 11/13/2024 21:31

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24K0069-04 A 03
	Preparation Batch: BMK0280	Sample Size: 5.62 g (wet)	Dry Weight:5.01 g
	Prepared: 11/13/2024	Final Volume: 5 mL	% Solids: 89.16
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0069-04 A 03
	Cleanup Batch: CMK0083	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24K0069-04 A 03
	Cleanup Batch: CMK0082	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	10.0	20.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	10.0	20.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	10.0	20.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	10.0	20.0	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	10.0	20.0	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	10.0	20.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	10.0	20.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*107*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*107*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*94.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*101*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 11/04/2024 12:45

Instrument: ICPMS1 Analyst: DOE — Analyzed: 11/07/2024 20:58

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-04 B 01

Preparation Batch: BMK0096 — Sample Size: 1.036 g (wet) — Dry Weight:0.92 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 88.39

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.22	3.07	mg/kg	
Cadmium	7440-43-9	20	0.03	0.11	0.21	mg/kg	
Copper	7440-50-8	20	0.19	0.55	9.28	mg/kg	
Nickel	7440-02-0	20	0.09	0.55	25.7	mg/kg	
Selenium	7782-49-2	20	0.20	0.55	0.44	mg/kg	J
Zinc	7440-66-6	20	3.2	6.6	31.8	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:45

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/12/2024 20:04

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-04 B

Preparation Batch: BMK0096 — Sample Size: 1.036 g (wet) — Dry Weight:0.92 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 88.39

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.11	0.22	ND	mg/kg	U
Barium	7440-39-3	20	0.12	0.55	30.2	mg/kg	
Beryllium	7440-41-7	20	0.02	0.22	0.15	mg/kg	J
Chromium	7440-47-3	100	1.42	2.73	27.6	mg/kg	D
Lead	7439-92-1	20	0.06	0.11	3.55	mg/kg	
Silver	7440-22-4	20	0.02	0.22	ND	mg/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 11/04/2024 12:45

Instrument: HYDRA Analyst: ML — Analyzed: 11/12/2024 13:53

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24K0069-04 B

Preparation Batch: BMK0105 — Sample Size: 0.205 g (wet) — Dry Weight:0.18 g

Prepared: 11/05/2024 — Final Volume: 50 mL — % Solids: 88.39

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00579	0.0276	0.0104	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04RE1 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 11/04/2024 12:45
Instrument: FID4 Analyst: NRB — Analyzed: 11/14/2024 12:29

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-04RE1 A 01
Preparation Batch: BMK0088 — Sample Size: 10 g (wet) — Dry Weight:8.92 g
Prepared: 11/07/2024 — Final Volume: 1 mL — % Solids: 89.16

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.61	65.1	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	11.2	143	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*111*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-I

24K0069-04RE1 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:45

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/11/2024 20:13

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-04RE1 B

Preparation Batch: BMK0096 — Sample Size: 1.036 g (wet) — Dry Weight:0.92 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 88.39

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Thallium	7440-28-0	20	0.03	0.22	0.03	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:50

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 14:52

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24K0069-05 E

Preparation Batch: BMK0124 — Sample Size: 4.48 g (wet) — Dry Weight:4.17 g

Prepared: 11/06/2024 — Final Volume: 5 mL — % Solids: 93.17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.60	1.20	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.60	1.20	ND	ug/kg	U
Bromomethane	74-83-9	1	2.40	2.40	ND	ug/kg	U
Chloroethane	75-00-3	1	2.40	2.40	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.20	2.40	ND	ug/kg	U
Acrolein	107-02-8	1	2.99	5.99	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.20	2.40	ND	ug/kg	U
Acetone	67-64-1	1	12.0	12.0	45.9	ug/kg	B
1,1-Dichloroethene	75-35-4	1	0.60	1.20	ND	ug/kg	U
Iodomethane	74-88-4	1	1.20	1.20	ND	ug/kg	U
Methylene Chloride	75-09-2	1	5.99	5.99	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.99	5.99	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.20	1.20	1.83	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.20	1.20	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.99	5.99	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.60	1.20	ND	ug/kg	U
2-Butanone	78-93-3	1	2.99	5.99	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.60	1.20	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.60	1.20	ND	ug/kg	U
Chloroform	67-66-3	1	0.60	1.20	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.60	1.20	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.20	1.20	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.60	1.20	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.60	1.20	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.60	1.20	ND	ug/kg	U
Benzene	71-43-2	1	0.60	1.20	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.60	1.20	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.60	1.20	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.60	1.20	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.60	1.20	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.99	5.99	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.99	5.99	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.60	1.20	ND	ug/kg	U
Toluene	108-88-3	1	0.60	1.20	ND	ug/kg	U
trans-1,3-Dichloropropene	10061-02-6	1	0.60	1.20	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:50

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 14:52

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.99	5.99	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.60	1.20	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.60	1.20	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.60	1.20	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.60	1.20	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.60	1.20	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.60	1.20	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.60	1.20	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.60	1.20	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.20	2.40	ND	ug/kg	U
o-Xylene	95-47-6	1	0.60	1.20	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.20	2.40	ND	ug/kg	U
Styrene	100-42-5	1	0.60	1.20	ND	ug/kg	U
Bromoform	75-25-2	1	0.60	1.20	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.60	1.20	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.40	2.40	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.99	5.99	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.60	1.20	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.60	1.20	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.60	1.20	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.60	1.20	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.60	1.20	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.60	1.20	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.60	1.20	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.60	1.20	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.60	1.20	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.60	1.20	0.98	ug/kg	J
1,3-Dichlorobenzene	541-73-1	1	0.60	1.20	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.60	1.20	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.60	1.20	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.20	1.20	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.99	5.99	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.99	5.99	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.99	5.99	ND	ug/kg	U
Naphthalene	91-20-3	1	2.99	5.99	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	2.99	5.99	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.60	1.20	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.60	1.20	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:50

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 14:52

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.99	5.99	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*126*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*101*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*103*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*105*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 11/04/2024 12:50
Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 20:04

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24K0069-05 D
Preparation Batch: BMK0093 — Sample Size: 3.25 g (wet) — Dry Weight:3.03 g
Prepared: 11/05/2024 — Final Volume: 5 mL — % Solids: 93.17

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	8620	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*98.8*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*100*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:50

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 23:10

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-05 A 04

Preparation Batch: BMK0281 — Sample Size: 10.73 g (wet) — Dry Weight:10.00 g

Prepared: 11/13/2024 — Final Volume: 1 mL — % Solids: 93.17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	5	50.0	100	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	5	175	250	ND	ug/kg	U
2-Chlorophenol	95-57-8	5	100	100	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	5	50.0	100	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	5	50.0	100	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	5	50.0	100	ND	ug/kg	U
Benzyl Alcohol	100-51-6	5	100	100	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	5	50.0	100	ND	ug/kg	U
2-Methylphenol	95-48-7	5	50.0	100	ND	ug/kg	U
Hexachloroethane	67-72-1	5	50.0	100	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	5	75.0	100	ND	ug/kg	U
4-Methylphenol	106-44-5	5	75.0	100	ND	ug/kg	U
Nitrobenzene	98-95-3	5	50.0	100	ND	ug/kg	U
Isophorone	78-59-1	5	75.0	100	ND	ug/kg	U
2-Nitrophenol	88-75-5	5	50.0	100	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	5	250	500	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	5	50.0	100	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	5	250	500	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	5	50.0	100	ND	ug/kg	U
Naphthalene	91-20-3	5	50.0	100	52.5	ug/kg	J, D
Benzoic acid	65-85-0	5	500	1000	ND	ug/kg	U
4-Chloroaniline	106-47-8	5	250	500	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	5	50.0	100	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	5	250	500	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	5	50.0	100	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	5	250	500	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	5	250	500	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	5	250	500	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	5	50.0	100	ND	ug/kg	U
2-Nitroaniline	88-74-4	5	250	500	ND	ug/kg	U
Acenaphthylene	208-96-8	5	50.0	100	ND	ug/kg	U
Dimethylphthalate	131-11-3	5	50.0	100	ND	ug/kg	U
2,6-Dinitrotoluene	606-20-2	5	250	500	ND	ug/kg	U
Acenaphthene	83-32-9	5	50.0	100	ND	ug/kg	U
3-Nitroaniline	99-09-2	5	250	500	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:50

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 23:10

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	5	500	1000	ND	ug/kg	U
Dibenzofuran	132-64-9	5	100	100	ND	ug/kg	U
4-Nitrophenol	100-02-7	5	250	500	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	5	250	500	ND	ug/kg	U
Fluorene	86-73-7	5	100	100	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	5	175	250	ND	ug/kg	U
Diethyl phthalate	84-66-2	5	175	250	ND	ug/kg	U
4-Nitroaniline	100-01-6	5	250	500	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	5	500	1000	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	5	50.0	100	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	5	100	100	ND	ug/kg	U
Hexachlorobenzene	118-74-1	5	100	100	ND	ug/kg	U
Pentachlorophenol	87-86-5	5	250	500	ND	ug/kg	U
Phenanthrene	85-01-8	5	50.0	100	50.6	ug/kg	J, D
Anthracene	120-12-7	5	50.0	100	ND	ug/kg	U
Carbazole	86-74-8	5	50.0	100	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	5	50.0	100	ND	ug/kg	U
Fluoranthene	206-44-0	5	50.0	100	62.8	ug/kg	J, D
Pyrene	129-00-0	5	50.0	100	52.8	ug/kg	J, D
Butylbenzylphthalate	85-68-7	5	50.0	100	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	5	50.0	100	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	5	250	500	ND	ug/kg	U
Chrysene	218-01-9	5	50.0	100	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	5	200	250	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	5	50.0	100	ND	ug/kg	U
Benzofluoranthenes, Total		5	150	200	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	5	50.0	100	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	5	100	100	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	100	100	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	100	100	ND	ug/kg	U
Pyridine	110-86-1	5	500	500	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	5	50.0	100	ND	ug/kg	U
Surrogate: 2-Fluorophenol				*27-120 %*	*95.5*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*91.6*	*%*	
Surrogate: 2-Chlorophenol-d4				*31-120 %*	*95.2*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*32-120 %*	*89.1*	*%*	
Surrogate: Nitrobenzene-d5				*30-120 %*	*96.1*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:50

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 23:10

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*94.6*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*78.2*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*107*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 11/04/2024 12:50

Instrument: NT17 Analyst: JZ — Analyzed: 11/14/2024 21:01

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-05 A 02

Preparation Batch: BMK0278 — Sample Size: 10.73 g (wet) — Dry Weight:10.00 g

Prepared: 11/13/2024 — Final Volume: 0.5 mL — % Solids: 93.17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	2.50	5.00	62.0	ug/kg	
2-Methylnaphthalene	91-57-6	1	2.50	5.00	12.5	ug/kg	
1-Methylnaphthalene	90-12-0	1	2.50	5.00	8.70	ug/kg	
Acenaphthylene	208-96-8	1	2.50	5.00	7.02	ug/kg	
Acenaphthene	83-32-9	1	2.50	5.00	26.9	ug/kg	
Dibenzofuran	132-64-9	1	2.50	5.00	16.0	ug/kg	
Fluorene	86-73-7	1	2.50	5.00	24.7	ug/kg	
Phenanthrene	85-01-8	1	2.50	5.00	82.8	ug/kg	
Anthracene	120-12-7	1	2.50	5.00	12.8	ug/kg	
Fluoranthene	206-44-0	1	2.50	5.00	97.8	ug/kg	
Pyrene	129-00-0	1	2.50	5.00	85.3	ug/kg	
Benzo(a)anthracene	56-55-3	1	2.50	5.00	22.7	ug/kg	
Chrysene	218-01-9	1	2.50	5.00	34.6	ug/kg	
Benzo(b)fluoranthene	205-99-2	1	2.50	5.00	27.7	ug/kg	
Benzo(k)fluoranthene	207-08-9	1	2.50	5.00	15.9	ug/kg	
Benzo(j)fluoranthene	205-82-3	1	2.50	5.00	16.4	ug/kg	
Benzofluoranthenes, Total		1	7.50	15.0	59.4	ug/kg	
Benzo(a)pyrene	50-32-8	1	2.50	5.00	25.3	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	2.50	5.00	7.83	ug/kg	
Dibenzo(a,h)anthracene	53-70-3	1	2.50	5.00	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	2.50	5.00	8.83	ug/kg	Q
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*73.1*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*65.9*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*93.0*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 11/04/2024 12:50
Instrument: ECD7 Analyst: AA — Analyzed: 11/13/2024 21:52

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24K0069-05 A 03
	Preparation Batch: BMK0280	Sample Size: 5.39 g (wet)	Dry Weight:5.02 g
	Prepared: 11/13/2024	Final Volume: 5 mL	% Solids: 93.17
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0069-05 A 03
	Cleanup Batch: CMK0083	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24K0069-05 A 03
	Cleanup Batch: CMK0082	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	10.0	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	10.0	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	10.0	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	10.0	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	10.0	19.9	64.6	ug/kg	
Aroclor 1254	11097-69-1	1	10.0	19.9	66.7	ug/kg	P1
Aroclor 1260	11096-82-5	1	10.0	19.9	61.3	ug/kg	P1
Aroclor 1262	37324-23-5	1	10.0	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	10.0	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*117*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*102*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*95.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*96.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 11/04/2024 12:50
Instrument: ICPMS1 Analyst: DOE — Analyzed: 11/07/2024 21:03

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-05 B 01
Preparation Batch: BMK0096 — Sample Size: 1.047 g (wet) — Dry Weight:0.98 g
Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 93.25

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.20	2.96	mg/kg	
Cadmium	7440-43-9	20	0.03	0.10	0.08	mg/kg	J
Copper	7440-50-8	20	0.18	0.51	11.4	mg/kg	
Nickel	7440-02-0	20	0.08	0.51	23.3	mg/kg	
Selenium	7782-49-2	20	0.18	0.51	0.41	mg/kg	J
Zinc	7440-66-6	20	3.0	6.1	33.2	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:50

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/14/2024 13:40

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-05 B

Preparation Batch: BMK0096 — Sample Size: 1.047 g (wet) — Dry Weight:0.98 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 93.25

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.10	0.20	ND	mg/kg	U
Barium	7440-39-3	20	0.12	0.51	26.3	mg/kg	
Beryllium	7440-41-7	20	0.02	0.20	0.12	mg/kg	J
Chromium	7440-47-3	20	0.27	0.51	15.7	mg/kg	
Lead	7439-92-1	20	0.05	0.10	7.50	mg/kg	
Silver	7440-22-4	20	0.02	0.20	0.03	mg/kg	J
Thallium	7440-28-0	20	0.02	0.20	0.03	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 11/04/2024 12:50

Instrument: HYDRA Analyst: ML — Analyzed: 11/12/2024 13:55

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24K0069-05 B

Preparation Batch: BMK0105 — Sample Size: 0.244 g (wet) — Dry Weight:0.23 g

Prepared: 11/05/2024 — Final Volume: 50 mL — % Solids: 93.25

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00461	0.0220	0.00776	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-J

24K0069-05RE1 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 11/04/2024 12:50
Instrument: FID4 Analyst: NRB — Analyzed: 11/14/2024 12:49

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-05RE1 A 01
Preparation Batch: BMK0088 — Sample Size: 10 g (wet) — Dry Weight:9.32 g
Prepared: 11/07/2024 — Final Volume: 1 mL — % Solids: 93.17

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.37	30.8	mg/kg	
HC ID: DIESEL						
Motor Oil Range Organics (C24-C38)	RRO	1	10.7	75.4	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*113*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:55
Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 15:17

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24K0069-06 E
Preparation Batch: BMK0124 — Sample Size: 5.29 g (wet) — Dry Weight:5.23 g
Prepared: 11/06/2024 — Final Volume: 5 mL — % Solids: 98.85

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.48	0.96	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.48	0.96	ND	ug/kg	U
Bromomethane	74-83-9	1	1.91	1.91	ND	ug/kg	U
Chloroethane	75-00-3	1	1.91	1.91	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	0.96	1.91	ND	ug/kg	U
Acrolein	107-02-8	1	2.39	4.78	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.96	1.91	ND	ug/kg	U
Acetone	67-64-1	1	9.56	9.56	40.5	ug/kg	B
1,1-Dichloroethene	75-35-4	1	0.48	0.96	ND	ug/kg	U
Iodomethane	74-88-4	1	0.96	0.96	ND	ug/kg	U
Methylene Chloride	75-09-2	1	4.78	4.78	ND	ug/kg	U
Acrylonitrile	107-13-1	1	4.78	4.78	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	0.96	0.96	1.81	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	0.96	0.96	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	4.78	4.78	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.48	0.96	ND	ug/kg	U
2-Butanone	78-93-3	1	2.39	4.78	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.48	0.96	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.48	0.96	ND	ug/kg	U
Chloroform	67-66-3	1	0.48	0.96	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.48	0.96	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	0.96	0.96	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.48	0.96	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.48	0.96	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.48	0.96	ND	ug/kg	U
Benzene	71-43-2	1	0.48	0.96	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.48	0.96	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.48	0.96	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.48	0.96	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.48	0.96	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	4.78	4.78	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.39	4.78	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.48	0.96	ND	ug/kg	U
Toluene	108-88-3	1	0.48	0.96	ND	ug/kg	U
trans-1,3-Dichloropropene	10061-02-6	1	0.48	0.96	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:55

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 15:17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.39	4.78	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.48	0.96	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.48	0.96	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.48	0.96	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.48	0.96	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.48	0.96	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.48	0.96	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.48	0.96	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.48	0.96	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	0.96	1.91	ND	ug/kg	U
o-Xylene	95-47-6	1	0.48	0.96	ND	ug/kg	U
Xylenes, total	1330-20-7	1	0.96	1.91	ND	ug/kg	U
Styrene	100-42-5	1	0.48	0.96	ND	ug/kg	U
Bromoform	75-25-2	1	0.48	0.96	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.48	0.96	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	1.91	1.91	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	4.78	4.78	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.48	0.96	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.48	0.96	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.48	0.96	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.48	0.96	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.48	0.96	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.48	0.96	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.48	0.96	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.48	0.96	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.48	0.96	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.48	0.96	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.48	0.96	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.48	0.96	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.48	0.96	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	0.96	0.96	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.39	4.78	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.39	4.78	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	4.78	4.78	ND	ug/kg	U
Naphthalene	91-20-3	1	2.39	4.78	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	2.39	4.78	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.48	0.96	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.48	0.96	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:55

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 15:17

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.39	4.78	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*127*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*104*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*103*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 11/04/2024 12:55
Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 20:27

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24K0069-06 C
Preparation Batch: BMK0093 — Sample Size: 4.493 g (wet) — Dry Weight:4.44 g
Prepared: 11/05/2024 — Final Volume: 5 mL — % Solids: 98.85

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	5690	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*98.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*97.4*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:55

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 23:48

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-06 A 04

Preparation Batch: BMK0281 — Sample Size: 10.12 g (wet) — Dry Weight:10.00 g

Prepared: 11/13/2024 — Final Volume: 1 mL — % Solids: 98.85

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	5	50.0	100	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	5	175	250	ND	ug/kg	U
2-Chlorophenol	95-57-8	5	100	100	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	5	50.0	100	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	5	50.0	100	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	5	50.0	100	ND	ug/kg	U
Benzyl Alcohol	100-51-6	5	100	100	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	5	50.0	100	ND	ug/kg	U
2-Methylphenol	95-48-7	5	50.0	100	ND	ug/kg	U
Hexachloroethane	67-72-1	5	50.0	100	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	5	75.0	100	ND	ug/kg	U
4-Methylphenol	106-44-5	5	75.0	100	ND	ug/kg	U
Nitrobenzene	98-95-3	5	50.0	100	ND	ug/kg	U
Isophorone	78-59-1	5	75.0	100	ND	ug/kg	U
2-Nitrophenol	88-75-5	5	50.0	100	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	5	250	500	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	5	50.0	100	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	5	250	500	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	5	50.0	100	ND	ug/kg	U
Naphthalene	91-20-3	5	50.0	100	ND	ug/kg	U
Benzoic acid	65-85-0	5	500	1000	ND	ug/kg	U
4-Chloroaniline	106-47-8	5	250	500	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	5	50.0	100	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	5	250	500	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	5	50.0	100	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	5	250	500	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	5	250	500	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	5	250	500	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	5	50.0	100	ND	ug/kg	U
2-Nitroaniline	88-74-4	5	250	500	ND	ug/kg	U
Acenaphthylene	208-96-8	5	50.0	100	ND	ug/kg	U
Dimethylphthalate	131-11-3	5	50.0	100	ND	ug/kg	U
2,6-Dinitrotoluene	606-20-2	5	250	500	ND	ug/kg	U
Acenaphthene	83-32-9	5	50.0	100	ND	ug/kg	U
3-Nitroaniline	99-09-2	5	250	500	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:55

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 23:48

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	5	500	1000	ND	ug/kg	U
Dibenzofuran	132-64-9	5	100	100	ND	ug/kg	U
4-Nitrophenol	100-02-7	5	250	500	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	5	250	500	ND	ug/kg	U
Fluorene	86-73-7	5	100	100	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	5	175	250	ND	ug/kg	U
Diethyl phthalate	84-66-2	5	175	250	ND	ug/kg	U
4-Nitroaniline	100-01-6	5	250	500	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	5	500	1000	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	5	50.0	100	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	5	100	100	ND	ug/kg	U
Hexachlorobenzene	118-74-1	5	100	100	ND	ug/kg	U
Pentachlorophenol	87-86-5	5	250	500	ND	ug/kg	U
Phenanthrene	85-01-8	5	50.0	100	126	ug/kg	D
Anthracene	120-12-7	5	50.0	100	ND	ug/kg	U
Carbazole	86-74-8	5	50.0	100	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	5	50.0	100	ND	ug/kg	U
Fluoranthene	206-44-0	5	50.0	100	425	ug/kg	D
Pyrene	129-00-0	5	50.0	100	354	ug/kg	D
Butylbenzylphthalate	85-68-7	5	50.0	100	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	5	50.0	100	198	ug/kg	D
3,3'-Dichlorobenzidine	91-94-1	5	250	500	ND	ug/kg	U
Chrysene	218-01-9	5	50.0	100	204	ug/kg	D
bis(2-Ethylhexyl)phthalate	117-81-7	5	200	250	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	5	50.0	100	ND	ug/kg	U
Benzofluoranthenes, Total		5	150	200	276	ug/kg	D
Benzo(a)pyrene	50-32-8	5	50.0	100	186	ug/kg	D
Indeno(1,2,3-cd)pyrene	193-39-5	5	100	100	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	100	100	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	100	100	ND	ug/kg	U
Pyridine	110-86-1	5	500	500	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	5	50.0	100	ND	ug/kg	U
Surrogate: 2-Fluorophenol				*27-120 %*	*87.3*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*82.1*	*%*	
Surrogate: 2-Chlorophenol-d4				*31-120 %*	*87.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*32-120 %*	*79.8*	*%*	
Surrogate: Nitrobenzene-d5				*30-120 %*	*88.8*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 12:55

Instrument: NT14 Analyst: RJL — Analyzed: 11/13/2024 23:48

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*86.0*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*75.9*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*93.2*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 11/04/2024 12:55

Instrument: NT17 Analyst: JZ — Analyzed: 11/14/2024 21:32

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-06 A 02

Preparation Batch: BMK0278 — Sample Size: 10.12 g (wet) — Dry Weight:10.00 g

Prepared: 11/13/2024 — Final Volume: 0.5 mL — % Solids: 98.85

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	2.50	5.00	61.9	ug/kg	
2-Methylnaphthalene	91-57-6	1	2.50	5.00	16.6	ug/kg	
1-Methylnaphthalene	90-12-0	1	2.50	5.00	10.9	ug/kg	
Acenaphthylene	208-96-8	1	2.50	5.00	8.63	ug/kg	
Acenaphthene	83-32-9	1	2.50	5.00	24.6	ug/kg	
Dibenzofuran	132-64-9	1	2.50	5.00	14.2	ug/kg	
Fluorene	86-73-7	1	2.50	5.00	18.5	ug/kg	
Phenanthrene	85-01-8	1	2.50	5.00	63.6	ug/kg	
Anthracene	120-12-7	1	2.50	5.00	13.5	ug/kg	
Fluoranthene	206-44-0	1	2.50	5.00	88.5	ug/kg	
Pyrene	129-00-0	1	2.50	5.00	81.5	ug/kg	
Benzo(a)anthracene	56-55-3	1	2.50	5.00	24.4	ug/kg	
Chrysene	218-01-9	1	2.50	5.00	35.2	ug/kg	
Benzo(b)fluoranthene	205-99-2	1	2.50	5.00	26.6	ug/kg	
Benzo(k)fluoranthene	207-08-9	1	2.50	5.00	15.5	ug/kg	
Benzo(j)fluoranthene	205-82-3	1	2.50	5.00	16.4	ug/kg	
Benzofluoranthenes, Total		1	7.50	15.0	58.5	ug/kg	
Benzo(a)pyrene	50-32-8	1	2.50	5.00	24.6	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	2.50	5.00	6.94	ug/kg	
Dibenzo(a,h)anthracene	53-70-3	1	2.50	5.00	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	2.50	5.00	7.69	ug/kg	Q
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*66.7*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*51.6*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*81.6*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 11/04/2024 12:55
Instrument: ECD7 Analyst: AA — Analyzed: 11/13/2024 22:13

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24K0069-06 A 03
	Preparation Batch: BMK0280	Sample Size: 5.09 g (wet)	Dry Weight:5.03 g
	Prepared: 11/13/2024	Final Volume: 5 mL	% Solids: 98.85
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0069-06 A 03
	Cleanup Batch: CMK0083	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24K0069-06 A 03
	Cleanup Batch: CMK0082	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	9.9	19.9	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	9.9	19.9	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	9.9	19.9	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	9.9	19.9	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	9.9	19.9	38.1	ug/kg	P1
Aroclor 1254	11097-69-1	1	9.9	19.9	20.3	ug/kg	
Aroclor 1260	11096-82-5	1	9.9	19.9	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	9.9	19.9	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	9.9	19.9	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*119*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*106*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*97.6*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*99.3*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 11/04/2024 12:55

Instrument: ICPMS1 Analyst: DOE — Analyzed: 11/07/2024 21:08

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-06 B 01

Preparation Batch: BMK0096 — Sample Size: 1.017 g (wet) — Dry Weight:0.92 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 90.59

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.22	3.53	mg/kg	
Cadmium	7440-43-9	20	0.03	0.11	0.07	mg/kg	J
Copper	7440-50-8	20	0.19	0.54	11.2	mg/kg	
Nickel	7440-02-0	20	0.24	0.54	27.2	mg/kg	
Selenium	7782-49-2	20	0.20	0.54	0.41	mg/kg	J
Zinc	7440-66-6	20	3.2	6.5	32.6	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:55

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/12/2024 20:08

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-06 B

Preparation Batch: BMK0096 — Sample Size: 1.017 g (wet) — Dry Weight:0.92 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 90.59

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.11	0.22	ND	mg/kg	U
Barium	7440-39-3	20	0.12	0.54	27.1	mg/kg	
Beryllium	7440-41-7	20	0.02	0.22	0.14	mg/kg	J
Chromium	7440-47-3	100	1.41	2.71	23.3	mg/kg	D
Lead	7439-92-1	20	0.06	0.11	3.71	mg/kg	
Silver	7440-22-4	20	0.02	0.22	ND	mg/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 11/04/2024 12:55

Instrument: HYDRA Analyst: ML — Analyzed: 11/12/2024 13:57

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24K0069-06 B

Preparation Batch: BMK0105 — Sample Size: 0.207 g (wet) — Dry Weight:0.19 g

Prepared: 11/05/2024 — Final Volume: 50 mL — % Solids: 90.59

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00560	0.0267	0.0205	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06RE1 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 11/04/2024 12:55
Instrument: FID4 Analyst: NRB — Analyzed: 11/14/2024 13:09

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-06RE1 A 01
Preparation Batch: BMK0088 — Sample Size: 10 g (wet) — Dry Weight:9.88 g
Prepared: 11/07/2024 — Final Volume: 1 mL — % Solids: 98.85

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.06	40.0	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	10.1	93.9	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*112*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-K

24K0069-06RE1 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 12:55

Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/11/2024 20:18

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-06RE1 B

Preparation Batch: BMK0096 — Sample Size: 1.017 g (wet) — Dry Weight:0.92 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 90.59

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Thallium	7440-28-0	20	0.03	0.22	0.03	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 13:00
Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 15:42

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate) — Extract ID: 24K0069-07 E
Preparation Batch: BMK0124 — Sample Size: 5.31 g (wet) — Dry Weight:4.76 g
Prepared: 11/06/2024 — Final Volume: 5 mL — % Solids: 89.69

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.52	1.05	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.52	1.05	ND	ug/kg	U
Bromomethane	74-83-9	1	2.10	2.10	ND	ug/kg	U
Chloroethane	75-00-3	1	2.10	2.10	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.05	2.10	ND	ug/kg	U
Acrolein	107-02-8	1	2.62	5.25	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.05	2.10	ND	ug/kg	U
Acetone	67-64-1	1	10.5	10.5	40.1	ug/kg	B
1,1-Dichloroethene	75-35-4	1	0.52	1.05	ND	ug/kg	U
Iodomethane	74-88-4	1	1.05	1.05	ND	ug/kg	U
Methylene Chloride	75-09-2	1	5.25	5.25	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.25	5.25	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.05	1.05	2.40	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.05	1.05	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.25	5.25	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.52	1.05	ND	ug/kg	U
2-Butanone	78-93-3	1	2.62	5.25	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.52	1.05	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.52	1.05	ND	ug/kg	U
Chloroform	67-66-3	1	0.52	1.05	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.52	1.05	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.05	1.05	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.52	1.05	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.52	1.05	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.52	1.05	ND	ug/kg	U
Benzene	71-43-2	1	0.52	1.05	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.52	1.05	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.52	1.05	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.52	1.05	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.52	1.05	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.25	5.25	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.62	5.25	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.52	1.05	ND	ug/kg	U
Toluene	108-88-3	1	0.52	1.05	ND	ug/kg	U
trans-1,3-Dichloropropene	10061-02-6	1	0.52	1.05	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 13:00

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 15:42

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.62	5.25	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.52	1.05	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.52	1.05	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.52	1.05	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.52	1.05	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.52	1.05	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.52	1.05	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.52	1.05	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.52	1.05	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.05	2.10	ND	ug/kg	U
o-Xylene	95-47-6	1	0.52	1.05	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.05	2.10	ND	ug/kg	U
Styrene	100-42-5	1	0.52	1.05	ND	ug/kg	U
Bromoform	75-25-2	1	0.52	1.05	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.52	1.05	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.10	2.10	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.25	5.25	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.52	1.05	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.52	1.05	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.52	1.05	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.52	1.05	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.52	1.05	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.52	1.05	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.52	1.05	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.52	1.05	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.52	1.05	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.52	1.05	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.52	1.05	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.52	1.05	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.52	1.05	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.05	1.05	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.62	5.25	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.62	5.25	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.25	5.25	ND	ug/kg	U
Naphthalene	91-20-3	1	2.62	5.25	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	2.62	5.25	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.52	1.05	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	1	0.52	1.05	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 13:00

Instrument: NT5 Analyst: LN — Analyzed: 11/06/2024 15:42

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.62	5.25	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-149 %*	*126*	*%*	
Surrogate: Toluene-d8				*77-120 %*	*101*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*103*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*103*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 11/04/2024 13:00
Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 20:50

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 24K0069-07 C
Preparation Batch: BMK0093 — Sample Size: 4.597 g (wet) — Dry Weight:4.12 g
Prepared: 11/05/2024 — Final Volume: 5 mL — % Solids: 89.69

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	6640	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*99.2*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*99.6*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 13:00

Instrument: NT14 Analyst: RJL — Analyzed: 11/14/2024 00:25

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-07 A 04

Preparation Batch: BMK0281 — Sample Size: 11.22 g (wet) — Dry Weight:10.06 g

Prepared: 11/13/2024 — Final Volume: 1 mL — % Solids: 89.69

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	5	49.7	99.4	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	5	174	248	ND	ug/kg	U
2-Chlorophenol	95-57-8	5	99.4	99.4	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	5	49.7	99.4	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	5	49.7	99.4	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	5	49.7	99.4	ND	ug/kg	U
Benzyl Alcohol	100-51-6	5	99.4	99.4	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	5	49.7	99.4	ND	ug/kg	U
2-Methylphenol	95-48-7	5	49.7	99.4	ND	ug/kg	U
Hexachloroethane	67-72-1	5	49.7	99.4	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	5	74.5	99.4	ND	ug/kg	U
4-Methylphenol	106-44-5	5	74.5	99.4	ND	ug/kg	U
Nitrobenzene	98-95-3	5	49.7	99.4	ND	ug/kg	U
Isophorone	78-59-1	5	74.5	99.4	ND	ug/kg	U
2-Nitrophenol	88-75-5	5	49.7	99.4	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	5	248	497	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	5	49.7	99.4	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	5	248	497	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	5	49.7	99.4	ND	ug/kg	U
Naphthalene	91-20-3	5	49.7	99.4	149	ug/kg	D
Benzoic acid	65-85-0	5	497	994	ND	ug/kg	U
4-Chloroaniline	106-47-8	5	248	497	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	5	49.7	99.4	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	5	248	497	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	5	49.7	99.4	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	5	248	497	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	5	248	497	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	5	248	497	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	5	49.7	99.4	ND	ug/kg	U
2-Nitroaniline	88-74-4	5	248	497	ND	ug/kg	U
Acenaphthylene	208-96-8	5	49.7	99.4	ND	ug/kg	U
Dimethylphthalate	131-11-3	5	49.7	99.4	ND	ug/kg	U
2,6-Dinitrotoluene	606-20-2	5	248	497	ND	ug/kg	U
Acenaphthene	83-32-9	5	49.7	99.4	ND	ug/kg	U
3-Nitroaniline	99-09-2	5	248	497	ND	ug/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 13:00

Instrument: NT14 Analyst: RJL — Analyzed: 11/14/2024 00:25

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	5	497	994	ND	ug/kg	U
Dibenzofuran	132-64-9	5	99.4	99.4	ND	ug/kg	U
4-Nitrophenol	100-02-7	5	248	497	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	5	248	497	ND	ug/kg	U
Fluorene	86-73-7	5	99.4	99.4	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	5	174	248	ND	ug/kg	U
Diethyl phthalate	84-66-2	5	174	248	ND	ug/kg	U
4-Nitroaniline	100-01-6	5	248	497	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	5	497	994	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	5	49.7	99.4	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	5	99.4	99.4	ND	ug/kg	U
Hexachlorobenzene	118-74-1	5	99.4	99.4	ND	ug/kg	U
Pentachlorophenol	87-86-5	5	248	497	ND	ug/kg	U
Phenanthrene	85-01-8	5	49.7	99.4	267	ug/kg	D
Anthracene	120-12-7	5	49.7	99.4	ND	ug/kg	U
Carbazole	86-74-8	5	49.7	99.4	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	5	49.7	99.4	ND	ug/kg	U
Fluoranthene	206-44-0	5	49.7	99.4	546	ug/kg	D
Pyrene	129-00-0	5	49.7	99.4	562	ug/kg	D
Butylbenzylphthalate	85-68-7	5	49.7	99.4	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	5	49.7	99.4	156	ug/kg	D
3,3'-Dichlorobenzidine	91-94-1	5	248	497	ND	ug/kg	U
Chrysene	218-01-9	5	49.7	99.4	265	ug/kg	D
bis(2-Ethylhexyl)phthalate	117-81-7	5	199	248	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	5	49.7	99.4	ND	ug/kg	U
Benzofluoranthenes, Total		5	149	199	325	ug/kg	D
Benzo(a)pyrene	50-32-8	5	49.7	99.4	198	ug/kg	D
Indeno(1,2,3-cd)pyrene	193-39-5	5	99.4	99.4	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	5	99.4	99.4	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	5	99.4	99.4	ND	ug/kg	U
Pyridine	110-86-1	5	497	497	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	5	49.7	99.4	ND	ug/kg	U
Surrogate: 2-Fluorophenol				*27-120 %*	*93.9*	*%*	
Surrogate: Phenol-d5				*29-120 %*	*90.1*	*%*	
Surrogate: 2-Chlorophenol-d4				*31-120 %*	*94.8*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*32-120 %*	*88.3*	*%*	
Surrogate: Nitrobenzene-d5				*30-120 %*	*98.1*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270E — Sampled: 11/04/2024 13:00

Instrument: NT14 Analyst: RJL — Analyzed: 11/14/2024 00:25

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2-Fluorobiphenyl		*35-120 %*	*93.0*	*%*	
Surrogate: 2,4,6-Tribromophenol		*24-134 %*	*77.8*	*%*	
Surrogate: p-Terphenyl-d14		*37-120 %*	*94.0*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Semivolatile Organic Compounds - SIM

Method: EPA 8270E-SIM — Sampled: 11/04/2024 13:00
Instrument: NT17 Analyst: JZ — Analyzed: 11/14/2024 22:02

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-07 A 02
Preparation Batch: BMK0278 — Sample Size: 11.16 g (wet) — Dry Weight:10.01 g
Prepared: 11/13/2024 — Final Volume: 0.5 mL — % Solids: 89.69

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Naphthalene	91-20-3	1	2.50	5.00	145	ug/kg	
2-Methylnaphthalene	91-57-6	1	2.50	5.00	29.2	ug/kg	
1-Methylnaphthalene	90-12-0	1	2.50	5.00	20.9	ug/kg	
Acenaphthylene	208-96-8	1	2.50	5.00	19.2	ug/kg	
Acenaphthene	83-32-9	1	2.50	5.00	28.7	ug/kg	
Dibenzofuran	132-64-9	1	2.50	5.00	27.4	ug/kg	
Fluorene	86-73-7	1	2.50	5.00	30.4	ug/kg	
Phenanthrene	85-01-8	1	2.50	5.00	128	ug/kg	
Anthracene	120-12-7	1	2.50	5.00	22.7	ug/kg	
Fluoranthene	206-44-0	1	2.50	5.00	185	ug/kg	
Pyrene	129-00-0	1	2.50	5.00	166	ug/kg	
Benzo(a)anthracene	56-55-3	1	2.50	5.00	36.4	ug/kg	
Chrysene	218-01-9	1	2.50	5.00	61.0	ug/kg	
Benzo(b)fluoranthene	205-99-2	1	2.50	5.00	48.2	ug/kg	
Benzo(k)fluoranthene	207-08-9	1	2.50	5.00	24.5	ug/kg	
Benzo(j)fluoranthene	205-82-3	1	2.50	5.00	25.3	ug/kg	
Benzofluoranthenes, Total		1	7.49	15.0	96.8	ug/kg	
Benzo(a)pyrene	50-32-8	1	2.50	5.00	40.6	ug/kg	
Indeno(1,2,3-cd)pyrene	193-39-5	1	2.50	5.00	8.08	ug/kg	
Dibenzo(a,h)anthracene	53-70-3	1	2.50	5.00	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	2.50	5.00	9.72	ug/kg	Q
Surrogate: 2-Methylnaphthalene-d10				*32-120 %*	*54.9*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*21-133 %*	*30.6*	*%*	
Surrogate: Fluoranthene-d10				*36-134 %*	*62.5*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Aroclor PCB

Method: EPA 8082A — Sampled: 11/04/2024 13:00
Instrument: ECD7 Analyst: AA — Analyzed: 11/13/2024 22:35

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 24K0069-07 A 03
	Preparation Batch: BMK0280	Sample Size: 5.59 g (wet)	Dry Weight:5.01 g
	Prepared: 11/13/2024	Final Volume: 5 mL	% Solids: 89.69
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0069-07 A 03
	Cleanup Batch: CMK0083	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	
Sample Cleanup:	Cleanup Method: Sulfur		Extract ID:24K0069-07 A 03
	Cleanup Batch: CMK0082	Initial Volume: 5 uL	
	Cleaned: 13-Nov-2024	Final Volume: 5 uL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	5	49.9	99.7	ND	ug/kg	U
Aroclor 1221	11104-28-2	5	49.9	99.7	ND	ug/kg	U
Aroclor 1232	11141-16-5	5	49.9	99.7	ND	ug/kg	U
Aroclor 1242	53469-21-9	5	49.9	99.7	ND	ug/kg	U
Aroclor 1248	12672-29-6	5	49.9	99.7	ND	ug/kg	U
Aroclor 1254	11097-69-1	5	49.9	99.7	ND	ug/kg	U
Aroclor 1260	11096-82-5	5	49.9	99.7	ND	ug/kg	U
Aroclor 1262	37324-23-5	5	49.9	99.7	ND	ug/kg	U
Aroclor 1268	11100-14-4	5	49.9	99.7	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*115*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*108*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*105*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*115*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B UCT-KED — Sampled: 11/04/2024 13:00

Instrument: ICPMS1 Analyst: DOE — Analyzed: 11/07/2024 21:13

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-07 B 01

Preparation Batch: BMK0096 — Sample Size: 1.015 g (wet) — Dry Weight:0.90 g

Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 88.49

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.04	0.22	2.56	mg/kg	
Cadmium	7440-43-9	20	0.03	0.11	0.09	mg/kg	J
Copper	7440-50-8	20	0.19	0.56	9.87	mg/kg	
Nickel	7440-02-0	20	0.09	0.56	27.7	mg/kg	
Selenium	7782-49-2	20	0.20	0.56	0.26	mg/kg	J
Zinc	7440-66-6	20	3.3	6.7	23.1	mg/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Metals and Metallic Compounds

Method: EPA 6020B — Sampled: 11/04/2024 13:00
Instrument: ICPMS1 Analyst: HAL — Analyzed: 11/12/2024 20:11

Sample Preparation: Preparation Method: SWN EPA 3050B — Extract ID: 24K0069-07 B
Preparation Batch: BMK0096 — Sample Size: 1.015 g (wet) — Dry Weight:0.90 g
Prepared: 11/06/2024 — Final Volume: 50 mL — % Solids: 88.49

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Antimony	7440-36-0	20	0.11	0.22	ND	mg/kg	U
Barium	7440-39-3	20	0.13	0.56	14.1	mg/kg	
Beryllium	7440-41-7	20	0.02	0.22	0.10	mg/kg	J
Chromium	7440-47-3	20	0.29	0.56	18.0	mg/kg	
Lead	7439-92-1	20	0.06	0.11	3.31	mg/kg	
Silver	7440-22-4	20	0.02	0.22	ND	mg/kg	U
Thallium	7440-28-0	20	0.03	0.22	ND	mg/kg	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B — Sampled: 11/04/2024 13:00
Instrument: HYDRA Analyst: ML — Analyzed: 11/12/2024 14:00

Sample Preparation: Preparation Method: SMM EPA 7471B — Extract ID: 24K0069-07 B
Preparation Batch: BMK0105 — Sample Size: 0.209 g (wet) — Dry Weight:0.18 g
Prepared: 11/05/2024 — Final Volume: 50 mL — % Solids: 88.49

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.00568	0.0270	0.0134	mg/kg	J

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

SP-1-L

24K0069-07RE1 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-Dx — Sampled: 11/04/2024 13:00
Instrument: FID4 Analyst: NRB — Analyzed: 11/14/2024 13:29

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 24K0069-07RE1 A 01
Preparation Batch: BMK0088 — Sample Size: 10 g (wet) — Dry Weight:8.97 g
Prepared: 11/07/2024 — Final Volume: 1 mL — % Solids: 89.69

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Diesel Range Organics (C12-C24)	DRO	1	5.57	76.0	mg/kg	
HC ID: DRO						
Motor Oil Range Organics (C24-C38)	RRO	1	11.1	170	mg/kg	
HC ID: MOTOR OIL						
Surrogate: o-Terphenyl			*50-150 %*	*116*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Trip Blanks

24K0069-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:30
Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 12:51

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 24K0069-08 A
Preparation Batch: BMK0091 — Sample Size: 10 mL
Prepared: 11/05/2024 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.10	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.10	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	0.50	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	0.50	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.10	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.10	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	2.50	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.10	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.10	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.10	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.10	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.10	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.10	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.10	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.10	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.10	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.10	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.10	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.10	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	2.50	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.10	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.10	0.20	ND	ug/L	U
trans-1,3-Dichloropropene	10061-02-6	1	0.10	0.20	ND	ug/L	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Trip Blanks

24K0069-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:30

Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 12:51

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	1	2.50	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.10	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.10	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.10	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.10	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.10	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.10	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.20	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.10	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.30	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.10	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.25	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.10	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.10	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.10	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.10	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.10	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.10	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.10	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.10	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.10	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.10	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.10	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.10	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.25	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.25	0.50	ND	ug/L	U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Trip Blanks

24K0069-08 (Water)

Volatile Organic Compounds

Method: EPA 8260D — Sampled: 11/04/2024 12:30

Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 12:51

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	2.50	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4				*80-129 %*	*99.5*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*98.4*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*97.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*96.9*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Trip Blanks

24K0069-08 (Water)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 11/04/2024 12:30
Instrument: NT20 Analyst: LN — Analyzed: 11/05/2024 12:51

Sample Preparation: Preparation Method: EPA 5030C (Purge and Trap) — Extract ID: 24K0069-08 A
Preparation Batch: BMK0091 — Sample Size: 10 mL
Prepared: 11/05/2024 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*98.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*97.4*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - NWTPHg

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0091-BLK1)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 10:57						
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	4.89		ug/L	*5.00*		*97.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.83		ug/L	*5.00*		*96.7*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0091-BLK2)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 10:57							
Chloromethane	ND	0.50	0.50	ug/L							U
Vinyl Chloride	ND	0.10	0.20	ug/L							U
Bromomethane	ND	1.00	1.00	ug/L							U
Chloroethane	ND	0.20	0.20	ug/L							U
Trichlorofluoromethane	ND	0.20	0.20	ug/L							U
Acrolein	ND	5.00	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.20	0.20	ug/L							U
Acetone	ND	5.00	5.00	ug/L							U
1,1-Dichloroethene	ND	0.10	0.20	ug/L							U
Iodomethane	ND	0.50	1.00	ug/L							U
Methylene Chloride	ND	1.00	1.00	ug/L							U
Acrylonitrile	ND	0.50	1.00	ug/L							U
Carbon Disulfide	ND	0.20	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.10	0.20	ug/L							U
Vinyl Acetate	ND	0.20	0.20	ug/L							U
1,1-Dichloroethane	ND	0.10	0.20	ug/L							U
2-Butanone	ND	2.50	5.00	ug/L							U
2,2-Dichloropropane	ND	0.20	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.10	0.20	ug/L							U
Chloroform	ND	0.10	0.20	ug/L							U
Bromochloromethane	ND	0.10	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.10	0.20	ug/L							U
1,1-Dichloropropene	ND	0.10	0.20	ug/L							U
Carbon tetrachloride	ND	0.10	0.20	ug/L							U
1,2-Dichloroethane	ND	0.10	0.20	ug/L							U
Benzene	ND	0.10	0.20	ug/L							U
Trichloroethene	ND	0.10	0.20	ug/L							U
1,2-Dichloropropane	ND	0.10	0.20	ug/L							U
Bromodichloromethane	ND	0.10	0.20	ug/L							U
Dibromomethane	ND	0.10	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	1.00	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	2.50	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.10	0.20	ug/L							U
Toluene	ND	0.10	0.20	ug/L							U
trans-1,3-Dichloropropene	ND	0.10	0.20	ug/L							U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0091-BLK2)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 10:57							
2-Hexanone	ND	2.50	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.20	0.20	ug/L							U
1,3-Dichloropropane	ND	0.10	0.20	ug/L							U
Tetrachloroethene	ND	0.10	0.20	ug/L							U
Dibromochloromethane	ND	0.10	0.20	ug/L							U
1,2-Dibromoethane	ND	0.10	0.20	ug/L							U
Chlorobenzene	ND	0.10	0.20	ug/L							U
Ethylbenzene	ND	0.10	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.10	0.20	ug/L							U
m,p-Xylene	ND	0.20	0.40	ug/L							U
o-Xylene	ND	0.10	0.20	ug/L							U
Xylenes, total	ND	0.30	0.60	ug/L							U
Styrene	ND	0.10	0.20	ug/L							U
Bromoform	ND	0.20	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.20	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.25	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	1.00	1.00	ug/L							U
n-Propylbenzene	ND	0.10	0.20	ug/L							U
Bromobenzene	ND	0.10	0.20	ug/L							U
Isopropyl Benzene	ND	0.10	0.20	ug/L							U
2-Chlorotoluene	ND	0.10	0.20	ug/L							U
4-Chlorotoluene	ND	0.10	0.20	ug/L							U
t-Butylbenzene	ND	0.10	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.10	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.10	0.20	ug/L							U
s-Butylbenzene	ND	0.10	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.10	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.10	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.20	0.20	ug/L							U
n-Butylbenzene	ND	0.20	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.10	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.50	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.25	0.50	ug/L							U
Hexachloro-1,3-Butadiene	ND	0.50	0.50	ug/L							U
Naphthalene	ND	0.50	0.50	ug/L							U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0091-BLK2)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 10:57							
1,2,3-Trichlorobenzene	ND	0.50	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.20	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.25	0.50	ug/L							U
2-Pentanone	ND	2.50	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.12			ug/L	*5.00*		*102*	*80-129*			
Surrogate: Toluene-d8	4.89			ug/L	*5.00*		*97.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.83			ug/L	*5.00*		*96.7*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.96			ug/L	*5.00*		*99.2*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - NWTPHg

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0091-BS1)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 09:02						
Gasoline Range Organics (Tol-Nap)	1180	100	ug/L	1000		118	72-128			
Surrogate: Toluene-d8	4.84		ug/L	*5.00*		*96.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.98		ug/L	*5.00*		*99.7*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0091-BS2)					Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 09:25						
Chloromethane	8.53	0.50	0.50	ug/L	10.0		85.3	60-138			
Vinyl Chloride	9.21	0.10	0.20	ug/L	10.0		92.1	66-133			
Bromomethane	9.79	1.00	1.00	ug/L	10.0		97.9	72-131			
Chloroethane	9.74	0.20	0.20	ug/L	10.0		97.4	60-155			
Trichlorofluoromethane	10.2	0.20	0.20	ug/L	10.0		102	62-141			
Acrolein	45.1	5.00	5.00	ug/L	50.0		90.2	52-190			
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.79	0.20	0.20	ug/L	10.0		97.9	76-129			
Acetone	44.4	5.00	5.00	ug/L	50.0		88.8	58-142			
1,1-Dichloroethene	9.97	0.10	0.20	ug/L	10.0		99.7	69-135			
Iodomethane	10.0	0.50	1.00	ug/L	10.0		100	56-147			
Methylene Chloride	10.8	1.00	1.00	ug/L	10.0		108	65-135			
Acrylonitrile	9.43	0.50	1.00	ug/L	10.0		94.3	64-134			
Carbon Disulfide	9.75	0.20	0.20	ug/L	10.0		97.5	78-125			
trans-1,2-Dichloroethene	9.94	0.10	0.20	ug/L	10.0		99.4	78-128			
Vinyl Acetate	9.63	0.20	0.20	ug/L	10.0		96.3	55-138			
1,1-Dichloroethane	10.1	0.10	0.20	ug/L	10.0		101	76-124			
2-Butanone	45.7	2.50	5.00	ug/L	50.0		91.3	61-140			
2,2-Dichloropropane	10.7	0.20	0.20	ug/L	10.0		107	66-147			
cis-1,2-Dichloroethene	9.90	0.10	0.20	ug/L	10.0		99.0	80-121			
Chloroform	10.2	0.10	0.20	ug/L	10.0		102	80-122			
Bromochloromethane	9.67	0.10	0.20	ug/L	10.0		96.7	80-121			
1,1,1-Trichloroethane	10.1	0.10	0.20	ug/L	10.0		101	79-123			
1,1-Dichloropropene	9.89	0.10	0.20	ug/L	10.0		98.9	80-127			
Carbon tetrachloride	9.92	0.10	0.20	ug/L	10.0		99.2	53-137			
1,2-Dichloroethane	9.69	0.10	0.20	ug/L	10.0		96.9	75-123			
Benzene	10.0	0.10	0.20	ug/L	10.0		100	80-120			
Trichloroethene	10.1	0.10	0.20	ug/L	10.0		101	80-120			
1,2-Dichloropropane	10.1	0.10	0.20	ug/L	10.0		101	80-120			
Bromodichloromethane	9.84	0.10	0.20	ug/L	10.0		98.4	80-121			
Dibromomethane	9.53	0.10	0.20	ug/L	10.0		95.3	80-120			
2-Chloroethyl vinyl ether	9.15	1.00	1.00	ug/L	10.0		91.5	64-120			
4-Methyl-2-Pentanone	44.8	2.50	5.00	ug/L	50.0		89.6	67-133			
cis-1,3-Dichloropropene	9.79	0.10	0.20	ug/L	10.0		97.9	80-124			
Toluene	9.99	0.10	0.20	ug/L	10.0		99.9	80-120			
trans-1,3-Dichloropropene	9.54	0.10	0.20	ug/L	10.0		95.4	71-127			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0091-BS2)					Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 09:25						
2-Hexanone	45.8	2.50	5.00	ug/L	50.0		91.5	69-133			
1,1,2-Trichloroethane	9.31	0.20	0.20	ug/L	10.0		93.1	80-121			
1,3-Dichloropropane	9.68	0.10	0.20	ug/L	10.0		96.8	80-120			
Tetrachloroethene	10.3	0.10	0.20	ug/L	10.0		103	80-120			
Dibromochloromethane	9.91	0.10	0.20	ug/L	10.0		99.1	65-135			
1,2-Dibromoethane	9.46	0.10	0.20	ug/L	10.0		94.6	80-121			
Chlorobenzene	10.2	0.10	0.20	ug/L	10.0		102	80-120			
Ethylbenzene	10.3	0.10	0.20	ug/L	10.0		103	80-120			
1,1,1,2-Tetrachloroethane	10.0	0.10	0.20	ug/L	10.0		100	80-120			
m,p-Xylene	20.8	0.20	0.40	ug/L	20.0		104	80-121			
o-Xylene	10.3	0.10	0.20	ug/L	10.0		103	80-121			
Xylenes, total	31.1	0.30	0.60	ug/L	30.0		104	76-127			
Styrene	10.5	0.10	0.20	ug/L	10.0		105	80-124			
Bromoform	9.86	0.20	0.20	ug/L	10.0		98.6	51-134			
1,1,2,2-Tetrachloroethane	9.40	0.20	0.20	ug/L	10.0		94.0	77-123			
1,2,3-Trichloropropane	9.60	0.25	0.50	ug/L	10.0		96.0	76-125			
trans-1,4-Dichloro 2-Butene	9.58	1.00	1.00	ug/L	10.0		95.8	55-129			
n-Propylbenzene	10.9	0.10	0.20	ug/L	10.0		109	78-130			
Bromobenzene	10.4	0.10	0.20	ug/L	10.0		104	80-120			
Isopropyl Benzene	10.6	0.10	0.20	ug/L	10.0		106	80-128			
2-Chlorotoluene	10.4	0.10	0.20	ug/L	10.0		104	78-122			
4-Chlorotoluene	10.6	0.10	0.20	ug/L	10.0		106	80-121			
t-Butylbenzene	10.6	0.10	0.20	ug/L	10.0		106	78-125			
1,3,5-Trimethylbenzene	10.7	0.10	0.20	ug/L	10.0		107	80-129			
1,2,4-Trimethylbenzene	10.7	0.10	0.20	ug/L	10.0		107	80-127			
s-Butylbenzene	10.8	0.10	0.20	ug/L	10.0		108	78-129			
4-Isopropyl Toluene	10.8	0.10	0.20	ug/L	10.0		108	79-130			
1,3-Dichlorobenzene	10.5	0.10	0.20	ug/L	10.0		105	80-120			
1,4-Dichlorobenzene	10.3	0.20	0.20	ug/L	10.0		103	80-120			
n-Butylbenzene	11.0	0.20	0.20	ug/L	10.0		110	74-129			
1,2-Dichlorobenzene	10.3	0.10	0.20	ug/L	10.0		103	80-120			
1,2-Dibromo-3-chloropropane	9.36	0.50	0.50	ug/L	10.0		93.6	62-123			
1,2,4-Trichlorobenzene	10.7	0.25	0.50	ug/L	10.0		107	64-124			
Hexachloro-1,3-Butadiene	10.8	0.50	0.50	ug/L	10.0		108	65-145			
Naphthalene	10.3	0.50	0.50	ug/L	10.0		103	50-134			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0091-BS2)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 09:25							
1,2,3-Trichlorobenzene	10.4	0.50	0.50	ug/L	10.0		104	49-133			
Dichlorodifluoromethane	6.12	0.20	0.20	ug/L	10.0		61.2	48-147			Q
Methyl tert-butyl Ether	10.2	0.25	0.50	ug/L	10.0		102	71-132			
2-Pentanone	44.1	2.50	5.00	ug/L	50.0		88.2	69-134			
Surrogate: 1,2-Dichloroethane-d4	4.95			ug/L	*5.00*		*99.0*	*80-129*			
Surrogate: Toluene-d8	4.96			ug/L	*5.00*		*99.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.90			ug/L	*5.00*		*98.0*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.00			ug/L	*5.00*		*100*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - NWTPHg

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0091-BSD1)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 09:48						
Gasoline Range Organics (Tol-Nap)	1140	100	ug/L	1000		114	72-128	3.31	30	
Surrogate: Toluene-d8	4.88		ug/L	*5.00*		*97.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.88		ug/L	*5.00*		*97.7*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0091-BSD2)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 10:11							
Chloromethane	8.38	0.50	0.50	ug/L	10.0		83.8	60-138	1.72	30	
Vinyl Chloride	9.11	0.10	0.20	ug/L	10.0		91.1	66-133	1.16	30	
Bromomethane	9.53	1.00	1.00	ug/L	10.0		95.3	72-131	2.63	30	
Chloroethane	9.45	0.20	0.20	ug/L	10.0		94.5	60-155	3.00	30	
Trichlorofluoromethane	10.1	0.20	0.20	ug/L	10.0		101	62-141	1.24	30	
Acrolein	42.4	5.00	5.00	ug/L	50.0		84.8	52-190	6.11	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.53	0.20	0.20	ug/L	10.0		95.3	76-129	2.71	30	
Acetone	42.7	5.00	5.00	ug/L	50.0		85.5	58-142	3.84	30	
1,1-Dichloroethene	9.63	0.10	0.20	ug/L	10.0		96.3	69-135	3.48	30	
Iodomethane	9.88	0.50	1.00	ug/L	10.0		98.8	56-147	1.30	30	
Methylene Chloride	10.5	1.00	1.00	ug/L	10.0		105	65-135	2.86	30	
Acrylonitrile	8.69	0.50	1.00	ug/L	10.0		86.9	64-134	8.14	30	
Carbon Disulfide	9.55	0.20	0.20	ug/L	10.0		95.5	78-125	2.12	30	
trans-1,2-Dichloroethene	9.75	0.10	0.20	ug/L	10.0		97.5	78-128	1.98	30	
Vinyl Acetate	9.17	0.20	0.20	ug/L	10.0		91.7	55-138	4.87	30	
1,1-Dichloroethane	9.85	0.10	0.20	ug/L	10.0		98.5	76-124	2.41	30	
2-Butanone	44.0	2.50	5.00	ug/L	50.0		87.9	61-140	3.82	30	
2,2-Dichloropropane	10.2	0.20	0.20	ug/L	10.0		102	66-147	4.58	30	
cis-1,2-Dichloroethene	9.68	0.10	0.20	ug/L	10.0		96.8	80-121	2.21	30	
Chloroform	9.95	0.10	0.20	ug/L	10.0		99.5	80-122	2.55	30	
Bromochloromethane	9.12	0.10	0.20	ug/L	10.0		91.2	80-121	5.89	30	
1,1,1-Trichloroethane	9.89	0.10	0.20	ug/L	10.0		98.9	79-123	2.43	30	
1,1-Dichloropropene	9.66	0.10	0.20	ug/L	10.0		96.6	80-127	2.33	30	
Carbon tetrachloride	9.51	0.10	0.20	ug/L	10.0		95.1	53-137	4.21	30	
1,2-Dichloroethane	9.29	0.10	0.20	ug/L	10.0		92.9	75-123	4.13	30	
Benzene	9.74	0.10	0.20	ug/L	10.0		97.4	80-120	2.86	30	
Trichloroethene	9.77	0.10	0.20	ug/L	10.0		97.7	80-120	2.88	30	
1,2-Dichloropropane	9.73	0.10	0.20	ug/L	10.0		97.3	80-120	3.80	30	
Bromodichloromethane	9.44	0.10	0.20	ug/L	10.0		94.4	80-121	4.14	30	
Dibromomethane	9.07	0.10	0.20	ug/L	10.0		90.7	80-120	4.99	30	
2-Chloroethyl vinyl ether	8.94	1.00	1.00	ug/L	10.0		89.4	64-120	2.34	30	
4-Methyl-2-Pentanone	42.8	2.50	5.00	ug/L	50.0		85.6	67-133	4.58	30	
cis-1,3-Dichloropropene	9.46	0.10	0.20	ug/L	10.0		94.6	80-124	3.42	30	
Toluene	9.75	0.10	0.20	ug/L	10.0		97.5	80-120	2.44	30	
trans-1,3-Dichloropropene	9.16	0.10	0.20	ug/L	10.0		91.6	71-127	4.08	30	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0091-BSD2)					Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 10:11						
2-Hexanone	42.9	2.50	5.00	ug/L	50.0		85.8	69-133	6.49	30	
1,1,2-Trichloroethane	8.92	0.20	0.20	ug/L	10.0		89.2	80-121	4.24	30	
1,3-Dichloropropane	9.13	0.10	0.20	ug/L	10.0		91.3	80-120	5.86	30	
Tetrachloroethene	9.69	0.10	0.20	ug/L	10.0		96.9	80-120	5.62	30	
Dibromochloromethane	9.24	0.10	0.20	ug/L	10.0		92.4	65-135	7.06	30	
1,2-Dibromoethane	9.07	0.10	0.20	ug/L	10.0		90.7	80-121	4.24	30	
Chlorobenzene	9.68	0.10	0.20	ug/L	10.0		96.8	80-120	5.36	30	
Ethylbenzene	9.72	0.10	0.20	ug/L	10.0		97.2	80-120	5.32	30	
1,1,1,2-Tetrachloroethane	9.39	0.10	0.20	ug/L	10.0		93.9	80-120	6.62	30	
m,p-Xylene	19.9	0.20	0.40	ug/L	20.0		99.4	80-121	4.68	30	
o-Xylene	9.70	0.10	0.20	ug/L	10.0		97.0	80-121	5.79	30	
Xylenes, total	29.6	0.30	0.60	ug/L	30.0		98.6	76-127	5.04	30	
Styrene	9.93	0.10	0.20	ug/L	10.0		99.3	80-124	5.74	30	
Bromoform	9.00	0.20	0.20	ug/L	10.0		90.0	51-134	9.10	30	
1,1,2,2-Tetrachloroethane	8.67	0.20	0.20	ug/L	10.0		86.7	77-123	8.02	30	
1,2,3-Trichloropropane	8.68	0.25	0.50	ug/L	10.0		86.8	76-125	10.00	30	
trans-1,4-Dichloro 2-Butene	8.87	1.00	1.00	ug/L	10.0		88.7	55-129	7.74	30	
n-Propylbenzene	10.1	0.10	0.20	ug/L	10.0		101	78-130	8.09	30	
Bromobenzene	9.57	0.10	0.20	ug/L	10.0		95.7	80-120	7.86	30	
Isopropyl Benzene	9.85	0.10	0.20	ug/L	10.0		98.5	80-128	7.33	30	
2-Chlorotoluene	9.65	0.10	0.20	ug/L	10.0		96.5	78-122	7.72	30	
4-Chlorotoluene	9.74	0.10	0.20	ug/L	10.0		97.4	80-121	8.72	30	
t-Butylbenzene	9.83	0.10	0.20	ug/L	10.0		98.3	78-125	7.41	30	
1,3,5-Trimethylbenzene	9.87	0.10	0.20	ug/L	10.0		98.7	80-129	7.90	30	
1,2,4-Trimethylbenzene	9.95	0.10	0.20	ug/L	10.0		99.5	80-127	7.11	30	
s-Butylbenzene	9.93	0.10	0.20	ug/L	10.0		99.3	78-129	8.05	30	
4-Isopropyl Toluene	9.97	0.10	0.20	ug/L	10.0		99.7	79-130	7.85	30	
1,3-Dichlorobenzene	9.71	0.10	0.20	ug/L	10.0		97.1	80-120	7.91	30	
1,4-Dichlorobenzene	9.54	0.20	0.20	ug/L	10.0		95.4	80-120	8.05	30	
n-Butylbenzene	10.1	0.20	0.20	ug/L	10.0		101	74-129	8.91	30	
1,2-Dichlorobenzene	9.45	0.10	0.20	ug/L	10.0		94.5	80-120	8.66	30	
1,2-Dibromo-3-chloropropane	8.45	0.50	0.50	ug/L	10.0		84.5	62-123	10.30	30	
1,2,4-Trichlorobenzene	9.74	0.25	0.50	ug/L	10.0		97.4	64-124	9.44	30	
Hexachloro-1,3-Butadiene	9.69	0.50	0.50	ug/L	10.0		96.9	65-145	10.80	30	
Naphthalene	9.20	0.50	0.50	ug/L	10.0		92.0	50-134	11.10	30	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0091 - EPA 8260D

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0091-BSD2)					Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 10:11						
1,2,3-Trichlorobenzene	9.53	0.50	0.50	ug/L	10.0		95.3	49-133	8.93	30	
Dichlorodifluoromethane	6.39	0.20	0.20	ug/L	10.0		63.9	48-147	4.36	30	Q
Methyl tert-butyl Ether	9.89	0.25	0.50	ug/L	10.0		98.9	71-132	2.91	30	
2-Pentanone	42.0	2.50	5.00	ug/L	50.0		84.0	69-134	4.89	30	
Surrogate: 1,2-Dichloroethane-d4	4.95			ug/L	*5.00*		*99.0*	*80-129*			
Surrogate: Toluene-d8	4.99			ug/L	*5.00*		*99.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.97			ug/L	*5.00*		*99.4*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.97			ug/L	*5.00*		*99.4*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Volatile Organic Compounds - Quality Control

Batch BMK0093 - NWTPHg

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0093-BLK1)			Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 10:57							
Gasoline Range Organics (Tol-Nap)	ND	100	ug/kg							U
Surrogate: Toluene-d8	4.89		ug/kg	*5.00*		*97.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.83		ug/kg	*5.00*		*96.7*	*78-123*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0093 - NWTPHg

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0093-BS1)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 09:02						
Gasoline Range Organics (Tol-Nap)	58900	5000	ug/kg	50000		118	70-121			
Surrogate: Toluene-d8	4.84		ug/kg	*5.00*		*96.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.98		ug/kg	*5.00*		*99.7*	*78-123*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0093 - NWTPHg

Instrument: NT20 Analyst: LN

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0093-BSD1)				Prepared: 05-Nov-2024 Analyzed: 05-Nov-2024 09:48						
Gasoline Range Organics (Tol-Nap)	57000	5000	ug/kg	50000		114	70-121	3.31	30	
Surrogate: Toluene-d8	4.88		ug/kg	*5.00*		*97.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.88		ug/kg	*5.00*		*97.7*	*78-123*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Volatile Organic Compounds - Quality Control

Batch BMK0124 - EPA 8260D

Instrument: NT5 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0124-BLK1)				Prepared: 06-Nov-2024 Analyzed: 06-Nov-2024 12:20							
Chloromethane	ND	0.50	1.00	ug/kg							U
Vinyl Chloride	ND	0.50	1.00	ug/kg							U
Bromomethane	ND	2.00	2.00	ug/kg							U
Chloroethane	ND	2.00	2.00	ug/kg							U
Trichlorofluoromethane	ND	1.00	2.00	ug/kg							U
Acrolein	ND	2.50	5.00	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.00	2.00	ug/kg							U
Acetone	56.2	10.0	10.0	ug/kg							
1,1-Dichloroethene	ND	0.50	1.00	ug/kg							U
Iodomethane	ND	1.00	1.00	ug/kg							U
Methylene Chloride	ND	5.00	5.00	ug/kg							U
Acrylonitrile	ND	5.00	5.00	ug/kg							U
Carbon Disulfide	ND	1.00	1.00	ug/kg							U
trans-1,2-Dichloroethene	ND	1.00	1.00	ug/kg							U
Vinyl Acetate	ND	5.00	5.00	ug/kg							U
1,1-Dichloroethane	ND	0.50	1.00	ug/kg							U
2-Butanone	ND	2.50	5.00	ug/kg							U
2,2-Dichloropropane	ND	0.50	1.00	ug/kg							U
cis-1,2-Dichloroethene	ND	0.50	1.00	ug/kg							U
Chloroform	ND	0.50	1.00	ug/kg							U
Bromochloromethane	ND	0.50	1.00	ug/kg							U
1,1,1-Trichloroethane	ND	1.00	1.00	ug/kg							U
1,1-Dichloropropene	ND	0.50	1.00	ug/kg							U
Carbon tetrachloride	ND	0.50	1.00	ug/kg							U
1,2-Dichloroethane	ND	0.50	1.00	ug/kg							U
Benzene	ND	0.50	1.00	ug/kg							U
Trichloroethene	ND	0.50	1.00	ug/kg							U
1,2-Dichloropropane	ND	0.50	1.00	ug/kg							U
Bromodichloromethane	ND	0.50	1.00	ug/kg							U
Dibromomethane	ND	0.50	1.00	ug/kg							U
2-Chloroethyl vinyl ether	ND	5.00	5.00	ug/kg							U
4-Methyl-2-Pentanone	ND	2.50	5.00	ug/kg							U
cis-1,3-Dichloropropene	ND	0.50	1.00	ug/kg							U
Toluene	ND	0.50	1.00	ug/kg							U
trans-1,3-Dichloropropene	ND	0.50	1.00	ug/kg							U
2-Hexanone	ND	2.50	5.00	ug/kg							U
1,1,2-Trichloroethane	ND	0.50	1.00	ug/kg							U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0124 - EPA 8260D

Instrument: NT5 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0124-BLK1)				Prepared: 06-Nov-2024 Analyzed: 06-Nov-2024 12:20							
1,3-Dichloropropane	ND	0.50	1.00	ug/kg							U
Tetrachloroethene	ND	0.50	1.00	ug/kg							U
Dibromochloromethane	ND	0.50	1.00	ug/kg							U
1,2-Dibromoethane	ND	0.50	1.00	ug/kg							U
Chlorobenzene	ND	0.50	1.00	ug/kg							U
Ethylbenzene	ND	0.50	1.00	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	0.50	1.00	ug/kg							U
m,p-Xylene	ND	1.00	2.00	ug/kg							U
o-Xylene	ND	0.50	1.00	ug/kg							U
Xylenes, total	ND	1.00	2.00	ug/kg							U
Styrene	ND	0.50	1.00	ug/kg							U
Bromoform	ND	0.50	1.00	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	0.50	1.00	ug/kg							U
1,2,3-Trichloropropane	ND	2.00	2.00	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	5.00	5.00	ug/kg							U
n-Propylbenzene	ND	0.50	1.00	ug/kg							U
Bromobenzene	ND	0.50	1.00	ug/kg							U
Isopropyl Benzene	ND	0.50	1.00	ug/kg							U
2-Chlorotoluene	ND	0.50	1.00	ug/kg							U
4-Chlorotoluene	ND	0.50	1.00	ug/kg							U
t-Butylbenzene	ND	0.50	1.00	ug/kg							U
1,3,5-Trimethylbenzene	ND	0.50	1.00	ug/kg							U
1,2,4-Trimethylbenzene	ND	0.50	1.00	ug/kg							U
s-Butylbenzene	ND	0.50	1.00	ug/kg							U
4-Isopropyl Toluene	ND	0.50	1.00	ug/kg							U
1,3-Dichlorobenzene	ND	0.50	1.00	ug/kg							U
1,4-Dichlorobenzene	ND	0.50	1.00	ug/kg							U
n-Butylbenzene	ND	0.50	1.00	ug/kg							U
1,2-Dichlorobenzene	ND	1.00	1.00	ug/kg							U
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/kg							U
1,2,4-Trichlorobenzene	ND	2.50	5.00	ug/kg							U
Hexachloro-1,3-Butadiene	ND	5.00	5.00	ug/kg							U
Naphthalene	ND	2.50	5.00	ug/kg							U
1,2,3-Trichlorobenzene	ND	2.50	5.00	ug/kg							U
Dichlorodifluoromethane	ND	0.50	1.00	ug/kg							U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0124 - EPA 8260D

Instrument: NT5 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0124-BLK1)				Prepared: 06-Nov-2024 Analyzed: 06-Nov-2024 12:20							
Methyl tert-butyl Ether	ND	0.50	1.00	ug/kg							U
2-Pentanone	ND	2.50	5.00	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	53.9			ug/kg	*50.0*		*108*	*80-149*			
Surrogate: Toluene-d8	50.6			ug/kg	*50.0*		*101*	*77-120*			
Surrogate: 4-Bromofluorobenzene	49.8			ug/kg	*50.0*		*99.7*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	49.9			ug/kg	*50.0*		*99.8*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0124 - EPA 8260D

Instrument: NT5 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0124-BS1)				Prepared: 06-Nov-2024 Analyzed: 06-Nov-2024 11:07							
Chloromethane	46.7	0.50	1.00	ug/kg	50.0		93.4	64-132			
Vinyl Chloride	53.9	0.50	1.00	ug/kg	50.0		108	74-135			
Bromomethane	52.6	2.00	2.00	ug/kg	50.0		105	53-144			
Chloroethane	59.5	2.00	2.00	ug/kg	50.0		119	55-149			
Trichlorofluoromethane	67.7	1.00	2.00	ug/kg	50.0		135	61-164			Q
Acrolein	208	2.50	5.00	ug/kg	250		83.3	59-140			
1,1,2-Trichloro-1,2,2-Trifluoroethane	58.1	1.00	2.00	ug/kg	50.0		116	74-143			
Acetone	266	10.0	10.0	ug/kg	250		106	48-137			B
1,1-Dichloroethene	56.9	0.50	1.00	ug/kg	50.0		114	77-134			
Iodomethane	54.2	1.00	1.00	ug/kg	50.0		108	31-162			
Methylene Chloride	51.5	5.00	5.00	ug/kg	50.0		103	69-129			
Acrylonitrile	42.3	5.00	5.00	ug/kg	50.0		84.6	69-134			
Carbon Disulfide	53.7	1.00	1.00	ug/kg	50.0		107	71-137			
trans-1,2-Dichloroethene	57.5	1.00	1.00	ug/kg	50.0		115	79-130			
Vinyl Acetate	49.6	5.00	5.00	ug/kg	50.0		99.2	66-141			
1,1-Dichloroethane	56.7	0.50	1.00	ug/kg	50.0		113	80-126			
2-Butanone	210	2.50	5.00	ug/kg	250		84.0	70-132			
2,2-Dichloropropane	59.4	0.50	1.00	ug/kg	50.0		119	77-138			
cis-1,2-Dichloroethene	56.4	0.50	1.00	ug/kg	50.0		113	80-125			
Chloroform	56.7	0.50	1.00	ug/kg	50.0		113	80-126			
Bromochloromethane	53.7	0.50	1.00	ug/kg	50.0		107	80-129			
1,1,1-Trichloroethane	57.9	1.00	1.00	ug/kg	50.0		116	78-133			
1,1-Dichloropropene	55.4	0.50	1.00	ug/kg	50.0		111	63-145			
Carbon tetrachloride	53.7	0.50	1.00	ug/kg	50.0		107	71-129			
1,2-Dichloroethane	46.0	0.50	1.00	ug/kg	50.0		92.0	76-120			
Benzene	52.7	0.50	1.00	ug/kg	50.0		105	80-120			
Trichloroethene	54.5	0.50	1.00	ug/kg	50.0		109	80-120			
1,2-Dichloropropane	51.4	0.50	1.00	ug/kg	50.0		103	79-120			
Bromodichloromethane	50.7	0.50	1.00	ug/kg	50.0		101	80-122			
Dibromomethane	45.0	0.50	1.00	ug/kg	50.0		90.1	80-120			
2-Chloroethyl vinyl ether	43.7	5.00	5.00	ug/kg	50.0		87.4	51-129			
4-Methyl-2-Pentanone	201	2.50	5.00	ug/kg	250		80.4	73-121			
cis-1,3-Dichloropropene	51.6	0.50	1.00	ug/kg	50.0		103	80-120			
Toluene	52.1	0.50	1.00	ug/kg	50.0		104	75-120			
trans-1,3-Dichloropropene	48.0	0.50	1.00	ug/kg	50.0		96.0	80-124			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0124 - EPA 8260D

Instrument: NT5 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0124-BS1)					Prepared: 06-Nov-2024 Analyzed: 06-Nov-2024 11:07						
2-Hexanone	203	2.50	5.00	ug/kg	250		81.2	68-122			
1,1,2-Trichloroethane	45.6	0.50	1.00	ug/kg	50.0		91.2	79-120			
1,3-Dichloropropane	47.1	0.50	1.00	ug/kg	50.0		94.2	78-120			
Tetrachloroethene	55.2	0.50	1.00	ug/kg	50.0		110	74-124			
Dibromochloromethane	48.1	0.50	1.00	ug/kg	50.0		96.3	74-125			
1,2-Dibromoethane	44.6	0.50	1.00	ug/kg	50.0		89.2	80-120			
Chlorobenzene	52.4	0.50	1.00	ug/kg	50.0		105	78-120			
Ethylbenzene	54.6	0.50	1.00	ug/kg	50.0		109	80-125			
1,1,1,2-Tetrachloroethane	51.5	0.50	1.00	ug/kg	50.0		103	80-120			
m,p-Xylene	110	1.00	2.00	ug/kg	100		110	76-121			
o-Xylene	54.5	0.50	1.00	ug/kg	50.0		109	67-132			
Xylenes, total	165	1.00	2.00	ug/kg	150		110	67-132			
Styrene	55.1	0.50	1.00	ug/kg	50.0		110	80-120			
Bromoform	46.8	0.50	1.00	ug/kg	50.0		93.5	64-128			
1,1,2,2-Tetrachloroethane	43.9	0.50	1.00	ug/kg	50.0		87.8	74-120			
1,2,3-Trichloropropane	42.4	2.00	2.00	ug/kg	50.0		84.9	73-120			
trans-1,4-Dichloro 2-Butene	45.4	5.00	5.00	ug/kg	50.0		90.8	65-125			
n-Propylbenzene	56.9	0.50	1.00	ug/kg	50.0		114	72-124			
Bromobenzene	53.0	0.50	1.00	ug/kg	50.0		106	76-120			
Isopropyl Benzene	58.2	0.50	1.00	ug/kg	50.0		116	74-121			
2-Chlorotoluene	55.5	0.50	1.00	ug/kg	50.0		111	75-120			
4-Chlorotoluene	55.3	0.50	1.00	ug/kg	50.0		111	69-124			
t-Butylbenzene	57.6	0.50	1.00	ug/kg	50.0		115	72-122			
1,3,5-Trimethylbenzene	57.2	0.50	1.00	ug/kg	50.0		114	74-122			
1,2,4-Trimethylbenzene	56.3	0.50	1.00	ug/kg	50.0		113	75-121			
s-Butylbenzene	57.4	0.50	1.00	ug/kg	50.0		115	70-128			
4-Isopropyl Toluene	57.8	0.50	1.00	ug/kg	50.0		116	75-125			
1,3-Dichlorobenzene	54.0	0.50	1.00	ug/kg	50.0		108	75-120			
1,4-Dichlorobenzene	52.7	0.50	1.00	ug/kg	50.0		105	73-120			
n-Butylbenzene	57.4	0.50	1.00	ug/kg	50.0		115	73-130			
1,2-Dichlorobenzene	50.5	1.00	1.00	ug/kg	50.0		101	76-120			
1,2-Dibromo-3-chloropropane	42.2	2.50	5.00	ug/kg	50.0		84.5	72-136			
1,2,4-Trichlorobenzene	50.3	2.50	5.00	ug/kg	50.0		101	66-140			
Hexachloro-1,3-Butadiene	52.2	5.00	5.00	ug/kg	50.0		104	67-133			
Naphthalene	41.8	2.50	5.00	ug/kg	50.0		83.5	69-125			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0124 - EPA 8260D

Instrument: NT5 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0124-BS1)				Prepared: 06-Nov-2024 Analyzed: 06-Nov-2024 11:07							
1,2,3-Trichlorobenzene	46.1	2.50	5.00	ug/kg	50.0		92.3	68-132			
Dichlorodifluoromethane	38.9	0.50	1.00	ug/kg	50.0		77.8	67-142			Q
Methyl tert-butyl Ether	49.0	0.50	1.00	ug/kg	50.0		97.9	79-127			
2-Pentanone	200	2.50	5.00	ug/kg	250		80.2	77-120			
Surrogate: 1,2-Dichloroethane-d4	49.3			ug/kg	*50.0*		*98.5*	*80-149*			
Surrogate: Toluene-d8	49.0			ug/kg	*50.0*		*98.1*	*77-120*			
Surrogate: 4-Bromofluorobenzene	49.4			ug/kg	*50.0*		*98.8*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	47.9			ug/kg	*50.0*		*95.7*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0124 - EPA 8260D

Instrument: NT5 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0124-BSD1)				Prepared: 06-Nov-2024 Analyzed: 06-Nov-2024 11:31							
Chloromethane	44.6	0.50	1.00	ug/kg	50.0		89.3	64-132	4.53	30	
Vinyl Chloride	50.2	0.50	1.00	ug/kg	50.0		100	74-135	7.10	30	
Bromomethane	48.9	2.00	2.00	ug/kg	50.0		97.8	53-144	7.37	30	
Chloroethane	54.8	2.00	2.00	ug/kg	50.0		110	55-149	8.16	30	
Trichlorofluoromethane	64.7	1.00	2.00	ug/kg	50.0		129	61-164	4.51	30	Q
Acrolein	214	2.50	5.00	ug/kg	250		85.7	59-140	2.83	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	55.3	1.00	2.00	ug/kg	50.0		111	74-143	4.85	30	
Acetone	253	10.0	10.0	ug/kg	250		101	48-137	5.14	30	B
1,1-Dichloroethene	53.6	0.50	1.00	ug/kg	50.0		107	77-134	6.06	30	
Iodomethane	52.2	1.00	1.00	ug/kg	50.0		104	31-162	3.75	30	
Methylene Chloride	49.4	5.00	5.00	ug/kg	50.0		98.8	69-129	4.14	30	
Acrylonitrile	43.4	5.00	5.00	ug/kg	50.0		86.9	69-134	2.70	30	
Carbon Disulfide	50.3	1.00	1.00	ug/kg	50.0		101	71-137	6.49	30	
trans-1,2-Dichloroethene	53.9	1.00	1.00	ug/kg	50.0		108	79-130	6.51	30	
Vinyl Acetate	50.0	5.00	5.00	ug/kg	50.0		100	66-141	0.76	30	
1,1-Dichloroethane	54.0	0.50	1.00	ug/kg	50.0		108	80-126	4.89	30	
2-Butanone	224	2.50	5.00	ug/kg	250		89.4	70-132	6.27	30	
2,2-Dichloropropane	57.1	0.50	1.00	ug/kg	50.0		114	77-138	3.92	30	
cis-1,2-Dichloroethene	54.2	0.50	1.00	ug/kg	50.0		108	80-125	3.91	30	
Chloroform	54.4	0.50	1.00	ug/kg	50.0		109	80-126	4.03	30	
Bromochloromethane	53.3	0.50	1.00	ug/kg	50.0		107	80-129	0.77	30	
1,1,1-Trichloroethane	56.1	1.00	1.00	ug/kg	50.0		112	78-133	3.19	30	
1,1-Dichloropropene	53.3	0.50	1.00	ug/kg	50.0		107	63-145	3.73	30	
Carbon tetrachloride	51.6	0.50	1.00	ug/kg	50.0		103	71-129	3.93	30	
1,2-Dichloroethane	45.6	0.50	1.00	ug/kg	50.0		91.3	76-120	0.81	30	
Benzene	51.6	0.50	1.00	ug/kg	50.0		103	80-120	2.06	30	
Trichloroethene	52.7	0.50	1.00	ug/kg	50.0		105	80-120	3.34	30	
1,2-Dichloropropane	50.7	0.50	1.00	ug/kg	50.0		101	79-120	1.53	30	
Bromodichloromethane	50.0	0.50	1.00	ug/kg	50.0		100	80-122	1.35	30	
Dibromomethane	46.0	0.50	1.00	ug/kg	50.0		92.0	80-120	2.09	30	
2-Chloroethyl vinyl ether	38.2	5.00	5.00	ug/kg	50.0		76.4	51-129	13.40	30	
4-Methyl-2-Pentanone	211	2.50	5.00	ug/kg	250		84.6	73-121	5.03	30	
cis-1,3-Dichloropropene	51.4	0.50	1.00	ug/kg	50.0		103	80-120	0.36	30	
Toluene	51.3	0.50	1.00	ug/kg	50.0		103	75-120	1.45	30	
trans-1,3-Dichloropropene	48.6	0.50	1.00	ug/kg	50.0		97.2	80-124	1.28	30	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0124 - EPA 8260D

Instrument: NT5 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0124-BSD1)	Prepared: 06-Nov-2024 Analyzed: 06-Nov-2024 11:31										
2-Hexanone	208	2.50	5.00	ug/kg	250		83.0	68-122	2.27	30	
1,1,2-Trichloroethane	45.6	0.50	1.00	ug/kg	50.0		91.3	79-120	0.14	30	
1,3-Dichloropropane	45.8	0.50	1.00	ug/kg	50.0		91.5	78-120	2.87	30	
Tetrachloroethene	52.4	0.50	1.00	ug/kg	50.0		105	74-124	5.27	30	
Dibromochloromethane	47.8	0.50	1.00	ug/kg	50.0		95.5	74-125	0.82	30	
1,2-Dibromoethane	44.6	0.50	1.00	ug/kg	50.0		89.3	80-120	0.03	30	
Chlorobenzene	50.0	0.50	1.00	ug/kg	50.0		100	78-120	4.73	30	
Ethylbenzene	52.4	0.50	1.00	ug/kg	50.0		105	80-125	4.22	30	
1,1,1,2-Tetrachloroethane	50.0	0.50	1.00	ug/kg	50.0		100	80-120	3.01	30	
m,p-Xylene	104	1.00	2.00	ug/kg	100		104	76-121	5.77	30	
o-Xylene	53.2	0.50	1.00	ug/kg	50.0		106	67-132	2.42	30	
Xylenes, total	157	1.00	2.00	ug/kg	150		105	67-132	4.65	30	
Styrene	52.3	0.50	1.00	ug/kg	50.0		105	80-120	5.25	30	
Bromoform	45.2	0.50	1.00	ug/kg	50.0		90.3	64-128	3.47	30	
1,1,2,2-Tetrachloroethane	42.6	0.50	1.00	ug/kg	50.0		85.2	74-120	3.03	30	
1,2,3-Trichloropropane	42.2	2.00	2.00	ug/kg	50.0		84.3	73-120	0.66	30	
trans-1,4-Dichloro 2-Butene	42.8	5.00	5.00	ug/kg	50.0		85.6	65-125	5.96	30	
n-Propylbenzene	53.2	0.50	1.00	ug/kg	50.0		106	72-124	6.78	30	
Bromobenzene	50.1	0.50	1.00	ug/kg	50.0		100	76-120	5.74	30	
Isopropyl Benzene	54.0	0.50	1.00	ug/kg	50.0		108	74-121	7.53	30	
2-Chlorotoluene	51.9	0.50	1.00	ug/kg	50.0		104	75-120	6.61	30	
4-Chlorotoluene	52.3	0.50	1.00	ug/kg	50.0		105	69-124	5.62	30	
t-Butylbenzene	54.3	0.50	1.00	ug/kg	50.0		109	72-122	5.82	30	
1,3,5-Trimethylbenzene	53.6	0.50	1.00	ug/kg	50.0		107	74-122	6.62	30	
1,2,4-Trimethylbenzene	53.1	0.50	1.00	ug/kg	50.0		106	75-121	5.93	30	
s-Butylbenzene	54.0	0.50	1.00	ug/kg	50.0		108	70-128	6.19	30	
4-Isopropyl Toluene	55.3	0.50	1.00	ug/kg	50.0		111	75-125	4.50	30	
1,3-Dichlorobenzene	51.9	0.50	1.00	ug/kg	50.0		104	75-120	4.01	30	
1,4-Dichlorobenzene	51.4	0.50	1.00	ug/kg	50.0		103	73-120	2.64	30	
n-Butylbenzene	55.3	0.50	1.00	ug/kg	50.0		111	73-130	3.73	30	
1,2-Dichlorobenzene	49.9	1.00	1.00	ug/kg	50.0		99.7	76-120	1.25	30	
1,2-Dibromo-3-chloropropane	40.8	2.50	5.00	ug/kg	50.0		81.7	72-136	3.39	30	
1,2,4-Trichlorobenzene	53.9	2.50	5.00	ug/kg	50.0		108	66-140	6.89	30	
Hexachloro-1,3-Butadiene	55.5	5.00	5.00	ug/kg	50.0		111	67-133	6.23	30	
Naphthalene	46.1	2.50	5.00	ug/kg	50.0		92.2	69-125	9.86	30	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BMK0124 - EPA 8260D

Instrument: NT5 Analyst: LN

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0124-BSD1)				Prepared: 06-Nov-2024 Analyzed: 06-Nov-2024 11:31							
1,2,3-Trichlorobenzene	50.9	2.50	5.00	ug/kg	50.0		102	68-132	9.81	30	
Dichlorodifluoromethane	36.4	0.50	1.00	ug/kg	50.0		72.8	67-142	6.56	30	Q
Methyl tert-butyl Ether	48.7	0.50	1.00	ug/kg	50.0		97.5	79-127	0.42	30	
2-Pentanone	207	2.50	5.00	ug/kg	250		82.9	77-120	3.40	30	
Surrogate: 1,2-Dichloroethane-d4	50.3			ug/kg	*50.0*		*101*	*80-149*			
Surrogate: Toluene-d8	50.4			ug/kg	*50.0*		*101*	*77-120*			
Surrogate: 4-Bromofluorobenzene	49.6			ug/kg	*50.0*		*99.2*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	49.2			ug/kg	*50.0*		*98.5*	*80-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMK0281 - EPA 8270E

Instrument: NT14 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0281-BLK1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 18:45							
Phenol	ND	10.0	20.0	ug/kg							U
bis(2-chloroethyl) ether	ND	35.0	50.0	ug/kg							U
2-Chlorophenol	ND	20.0	20.0	ug/kg							U
1,3-Dichlorobenzene	ND	10.0	20.0	ug/kg							U
1,4-Dichlorobenzene	ND	10.0	20.0	ug/kg							U
1,2-Dichlorobenzene	ND	10.0	20.0	ug/kg							U
Benzyl Alcohol	ND	20.0	20.0	ug/kg							U
2,2'-Oxybis(1-chloropropane)	ND	10.0	20.0	ug/kg							U
2-Methylphenol	ND	10.0	20.0	ug/kg							U
Hexachloroethane	ND	10.0	20.0	ug/kg							U
N-Nitroso-di-n-Propylamine	ND	15.0	20.0	ug/kg							U
4-Methylphenol	ND	15.0	20.0	ug/kg							U
Nitrobenzene	ND	10.0	20.0	ug/kg							U
Isophorone	ND	15.0	20.0	ug/kg							U
2-Nitrophenol	ND	10.0	20.0	ug/kg							U
2,4-Dimethylphenol	ND	50.0	100	ug/kg							U
Bis(2-Chloroethoxy)methane	ND	10.0	20.0	ug/kg							U
2,4-Dichlorophenol	ND	50.0	100	ug/kg							U
1,2,4-Trichlorobenzene	ND	10.0	20.0	ug/kg							U
Naphthalene	ND	10.0	20.0	ug/kg							U
Benzoic acid	ND	100	200	ug/kg							U
4-Chloroaniline	ND	50.0	100	ug/kg							U
Hexachlorobutadiene	ND	10.0	20.0	ug/kg							U
4-Chloro-3-Methylphenol	ND	50.0	100	ug/kg							U
2-Methylnaphthalene	ND	10.0	20.0	ug/kg							U
Hexachlorocyclopentadiene	ND	50.0	100	ug/kg							U
2,4,6-Trichlorophenol	ND	50.0	100	ug/kg							U
2,4,5-Trichlorophenol	ND	50.0	100	ug/kg							U
2-Chloronaphthalene	ND	10.0	20.0	ug/kg							U
2-Nitroaniline	ND	50.0	100	ug/kg							U
Acenaphthylene	ND	10.0	20.0	ug/kg							U
Dimethylphthalate	ND	10.0	20.0	ug/kg							U
2,6-Dinitrotoluene	ND	50.0	100	ug/kg							U
Acenaphthene	ND	10.0	20.0	ug/kg							U
3-Nitroaniline	ND	50.0	100	ug/kg							U

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMK0281 - EPA 8270E

Instrument: NT14 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0281-BLK1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 18:45							
2,4-Dinitrophenol	ND	100	200	ug/kg							U
Dibenzofuran	ND	20.0	20.0	ug/kg							U
4-Nitrophenol	ND	50.0	100	ug/kg							U
2,4-Dinitrotoluene	ND	50.0	100	ug/kg							U
Fluorene	ND	20.0	20.0	ug/kg							U
4-Chlorophenylphenyl ether	ND	35.0	50.0	ug/kg							U
Diethyl phthalate	ND	35.0	50.0	ug/kg							U
4-Nitroaniline	ND	50.0	100	ug/kg							U
4,6-Dinitro-2-methylphenol	ND	100	200	ug/kg							U
N-Nitrosodiphenylamine	ND	10.0	20.0	ug/kg							U
4-Bromophenyl phenyl ether	ND	20.0	20.0	ug/kg							U
Hexachlorobenzene	ND	20.0	20.0	ug/kg							U
Pentachlorophenol	ND	50.0	100	ug/kg							U
Phenanthrene	ND	10.0	20.0	ug/kg							U
Anthracene	ND	10.0	20.0	ug/kg							U
Carbazole	ND	10.0	20.0	ug/kg							U
Di-n-Butylphthalate	ND	10.0	20.0	ug/kg							U
Fluoranthene	ND	10.0	20.0	ug/kg							U
Pyrene	ND	10.0	20.0	ug/kg							U
Butylbenzylphthalate	ND	10.0	20.0	ug/kg							U
Benzo(a)anthracene	ND	10.0	20.0	ug/kg							U
3,3'-Dichlorobenzidine	ND	50.0	100	ug/kg							U
Chrysene	ND	10.0	20.0	ug/kg							U
bis(2-Ethylhexyl)phthalate	ND	40.0	50.0	ug/kg							U
Di-n-Octylphthalate	ND	10.0	20.0	ug/kg							U
Benzofluoranthenes, Total	ND	30.0	40.0	ug/kg							U
Benzo(a)pyrene	ND	10.0	20.0	ug/kg							U
Indeno(1,2,3-cd)pyrene	ND	20.0	20.0	ug/kg							U
Dibenzo(a,h)anthracene	ND	20.0	20.0	ug/kg							U
Benzo(g,h,i)perylene	ND	20.0	20.0	ug/kg							U
Pyridine	ND	100	100	ug/kg							U
1-Methylnaphthalene	ND	10.0	20.0	ug/kg							U
Surrogate: 2-Fluorophenol	621			ug/kg	*750*		*82.8*	*27-120*			
Surrogate: Phenol-d5	625			ug/kg	*750*		*83.4*	*29-120*			
Surrogate: 2-Chlorophenol-d4	638			ug/kg	*750*		*85.1*	*31-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMK0281 - EPA 8270E

Instrument: NT14 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0281-BLK1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 18:45							
Surrogate: 1,2-Dichlorobenzene-d4	396			ug/kg	*500*		*79.1*	*32-120*			
Surrogate: Nitrobenzene-d5	429			ug/kg	*500*		*85.9*	*30-120*			
Surrogate: 2-Fluorobiphenyl	419			ug/kg	*500*		*83.7*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	570			ug/kg	*750*		*76.0*	*24-134*			
Surrogate: p-Terphenyl-d14	475			ug/kg	*500*		*95.0*	*37-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMK0281 - EPA 8270E

Instrument: NT14 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0281-BS1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 19:23							
Phenol	470	10.0	20.0	ug/kg	500		94.0	31-120			
bis(2-chloroethyl) ether	368	35.0	50.0	ug/kg	500		73.5	36-120			
2-Chlorophenol	363	20.0	20.0	ug/kg	500		72.6	39-120			
1,3-Dichlorobenzene	355	10.0	20.0	ug/kg	500		71.1	40-120			
1,4-Dichlorobenzene	355	10.0	20.0	ug/kg	500		71.0	39-120			
1,2-Dichlorobenzene	361	10.0	20.0	ug/kg	500		72.2	40-120			
Benzyl Alcohol	422	20.0	20.0	ug/kg	500		84.5	19-120			
2,2'-Oxybis(1-chloropropane)	375	10.0	20.0	ug/kg	500		74.9	32-120			
2-Methylphenol	443	10.0	20.0	ug/kg	500		88.7	11-120			
Hexachloroethane	366	10.0	20.0	ug/kg	500		73.3	38-120			
N-Nitroso-di-n-Propylamine	461	15.0	20.0	ug/kg	500		92.1	24-120			
4-Methylphenol	438	15.0	20.0	ug/kg	500		87.5	29-120			
Nitrobenzene	419	10.0	20.0	ug/kg	500		83.8	36-120			
Isophorone	479	15.0	20.0	ug/kg	500		95.8	37-126			
2-Nitrophenol	424	10.0	20.0	ug/kg	500		84.8	30-120			
2,4-Dimethylphenol	968	50.0	100	ug/kg	1500		64.5	10-120			
Bis(2-Chloroethoxy)methane	365	10.0	20.0	ug/kg	500		73.0	39-126			
2,4-Dichlorophenol	1070	50.0	100	ug/kg	1500		71.4	28-120			
1,2,4-Trichlorobenzene	389	10.0	20.0	ug/kg	500		77.8	35-120			
Naphthalene	390	10.0	20.0	ug/kg	500		78.0	41-120			
Benzoic acid	1210	100	200	ug/kg	2250		53.6	10-120			
4-Chloroaniline	1220	50.0	100	ug/kg	1500		81.2	10-120			
Hexachlorobutadiene	362	10.0	20.0	ug/kg	500		72.5	37-120			
4-Chloro-3-Methylphenol	1190	50.0	100	ug/kg	1500		79.6	32-120			
2-Methylnaphthalene	359	10.0	20.0	ug/kg	500		71.9	43-120			
Hexachlorocyclopentadiene	1190	50.0	100	ug/kg	1500		79.4	10-120			
2,4,6-Trichlorophenol	1100	50.0	100	ug/kg	1500		73.1	40-120			
2,4,5-Trichlorophenol	1180	50.0	100	ug/kg	1500		79.0	51.5-129			
2-Chloronaphthalene	395	10.0	20.0	ug/kg	500		78.9	40-120			
2-Nitroaniline	1540	50.0	100	ug/kg	1500		102	40-152			
Acenaphthylene	404	10.0	20.0	ug/kg	500		80.8	42-120			
Dimethylphthalate	445	10.0	20.0	ug/kg	500		88.9	43-120			
2,6-Dinitrotoluene	1490	50.0	100	ug/kg	1500		99.7	31-156			
Acenaphthene	429	10.0	20.0	ug/kg	500		85.8	45-120			
3-Nitroaniline	1210	50.0	100	ug/kg	1500		80.5	22-120			Q

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMK0281 - EPA 8270E

Instrument: NT14 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0281-BS1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 19:23							
2,4-Dinitrophenol	1400	100	200	ug/kg	2750		50.9	13-160			
Dibenzofuran	391	20.0	20.0	ug/kg	500		78.3	43-120			
4-Nitrophenol	1500	50.0	100	ug/kg	1500		100	18-154			Q
2,4-Dinitrotoluene	1530	50.0	100	ug/kg	1500		102	44-150			
Fluorene	434	20.0	20.0	ug/kg	500		86.8	40-120			
4-Chlorophenylphenyl ether	411	35.0	50.0	ug/kg	500		82.2	36-141			
Diethyl phthalate	518	35.0	50.0	ug/kg	500		104	43-140			
4-Nitroaniline	1280	50.0	100	ug/kg	1500		85.3	15-120			
4,6-Dinitro-2-methylphenol	2330	100	200	ug/kg	2750		84.8	33-144			
N-Nitrosodiphenylamine	468	10.0	20.0	ug/kg	500		93.6	17-120			
4-Bromophenyl phenyl ether	425	20.0	20.0	ug/kg	500		85.0	39-120			
Hexachlorobenzene	407	20.0	20.0	ug/kg	500		81.5	33-120			
Pentachlorophenol	1000	50.0	100	ug/kg	1500		66.9	33-133			
Phenanthrene	436	10.0	20.0	ug/kg	500		87.2	49-120			
Anthracene	454	10.0	20.0	ug/kg	500		90.8	37-120			
Carbazole	478	10.0	20.0	ug/kg	500		95.6	30-135			
Di-n-Butylphthalate	499	10.0	20.0	ug/kg	500		99.7	48-126			
Fluoranthene	514	10.0	20.0	ug/kg	500		103	38-127			
Pyrene	501	10.0	20.0	ug/kg	500		100	39-122			
Butylbenzylphthalate	574	10.0	20.0	ug/kg	500		115	45-132			
Benzo(a)anthracene	464	10.0	20.0	ug/kg	500		92.9	44-120			
3,3'-Dichlorobenzidine	765	50.0	100	ug/kg	1000		76.5	10-120			Q
Chrysene	465	10.0	20.0	ug/kg	500		92.9	47-120			
bis(2-Ethylhexyl)phthalate	501	40.0	50.0	ug/kg	500		100	10-130			
Di-n-Octylphthalate	461	10.0	20.0	ug/kg	500		92.1	10-124			
Benzofluoranthenes, Total	858	30.0	40.0	ug/kg	1000		85.8	30-160			
Benzo(a)pyrene	513	10.0	20.0	ug/kg	500		103	37-120			
Indeno(1,2,3-cd)pyrene	647	20.0	20.0	ug/kg	500		129	30-160			Q
Dibenzo(a,h)anthracene	624	20.0	20.0	ug/kg	500		125	30-160			Q
Benzo(g,h,i)perylene	582	20.0	20.0	ug/kg	500		116	10-150			Q
Pyridine	820	100	100	ug/kg	1500		54.7	10-147			
1-Methylnaphthalene	374	10.0	20.0	ug/kg	500		74.9	42-120			
Surrogate: 2-Fluorophenol	725			ug/kg	*750*		*96.7*	*27-120*			
Surrogate: Phenol-d5	746			ug/kg	*750*		*99.5*	*29-120*			
Surrogate: 2-Chlorophenol-d4	722			ug/kg	*750*		*96.2*	*31-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMK0281 - EPA 8270E

Instrument: NT14 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0281-BS1)	Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 19:23										
Surrogate: 1,2-Dichlorobenzene-d4	455			ug/kg	*500*		*91.0*	*32-120*			
Surrogate: Nitrobenzene-d5	499			ug/kg	*500*		*99.7*	*30-120*			
Surrogate: 2-Fluorobiphenyl	472			ug/kg	*500*		*94.4*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	690			ug/kg	*750*		*92.0*	*24-134*			
Surrogate: p-Terphenyl-d14	530			ug/kg	*500*		*106*	*37-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMK0281 - EPA 8270E

Instrument: NT14 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0281-BSD1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 20:01							
Phenol	532	10.0	20.0	ug/kg	500		106	31-120	12.30	30	
bis(2-chloroethyl) ether	416	35.0	50.0	ug/kg	500		83.2	36-120	12.40	30	
2-Chlorophenol	447	20.0	20.0	ug/kg	500		89.3	39-120	20.70	30	
1,3-Dichlorobenzene	413	10.0	20.0	ug/kg	500		82.5	40-120	15.00	30	
1,4-Dichlorobenzene	439	10.0	20.0	ug/kg	500		87.8	39-120	21.10	30	
1,2-Dichlorobenzene	410	10.0	20.0	ug/kg	500		81.9	40-120	12.60	30	
Benzyl Alcohol	478	20.0	20.0	ug/kg	500		95.7	19-120	12.40	30	
2,2'-Oxybis(1-chloropropane)	428	10.0	20.0	ug/kg	500		85.7	32-120	13.40	30	
2-Methylphenol	500	10.0	20.0	ug/kg	500		100	11-120	12.00	30	
Hexachloroethane	416	10.0	20.0	ug/kg	500		83.2	38-120	12.80	30	
N-Nitroso-di-n-Propylamine	532	15.0	20.0	ug/kg	500		106	24-120	14.40	30	
4-Methylphenol	491	15.0	20.0	ug/kg	500		98.1	29-120	11.40	30	
Nitrobenzene	481	10.0	20.0	ug/kg	500		96.1	36-120	13.70	30	
Isophorone	548	15.0	20.0	ug/kg	500		110	37-126	13.40	30	
2-Nitrophenol	492	10.0	20.0	ug/kg	500		98.3	30-120	14.70	30	
2,4-Dimethylphenol	1080	50.0	100	ug/kg	1500		72.3	10-120	11.40	30	
Bis(2-Chloroethoxy)methane	420	10.0	20.0	ug/kg	500		83.9	39-126	14.00	30	
2,4-Dichlorophenol	1220	50.0	100	ug/kg	1500		81.1	28-120	12.80	30	
1,2,4-Trichlorobenzene	445	10.0	20.0	ug/kg	500		89.0	35-120	13.40	30	
Naphthalene	448	10.0	20.0	ug/kg	500		89.6	41-120	13.80	30	
Benzoic acid	1480	100	200	ug/kg	2250		65.6	10-120	20.20	30	
4-Chloroaniline	1410	50.0	100	ug/kg	1500		93.9	10-120	14.60	30	
Hexachlorobutadiene	408	10.0	20.0	ug/kg	500		81.6	37-120	11.80	30	
4-Chloro-3-Methylphenol	1330	50.0	100	ug/kg	1500		88.4	32-120	10.50	30	
2-Methylnaphthalene	412	10.0	20.0	ug/kg	500		82.3	43-120	13.60	30	
Hexachlorocyclopentadiene	1400	50.0	100	ug/kg	1500		93.2	10-120	16.00	30	
2,4,6-Trichlorophenol	1230	50.0	100	ug/kg	1500		82.1	40-120	11.60	30	
2,4,5-Trichlorophenol	1350	50.0	100	ug/kg	1500		89.7	51.5-129	12.80	30	
2-Chloronaphthalene	453	10.0	20.0	ug/kg	500		90.6	40-120	13.70	30	
2-Nitroaniline	1740	50.0	100	ug/kg	1500		116	40-152	12.30	30	
Acenaphthylene	459	10.0	20.0	ug/kg	500		91.8	42-120	12.80	30	
Dimethylphthalate	502	10.0	20.0	ug/kg	500		100	43-120	12.00	30	
2,6-Dinitrotoluene	1690	50.0	100	ug/kg	1500		113	31-156	12.10	30	
Acenaphthene	491	10.0	20.0	ug/kg	500		98.2	45-120	13.60	30	
3-Nitroaniline	1490	50.0	100	ug/kg	1500		99.2	22-120	20.80	30	Q

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMK0281 - EPA 8270E

Instrument: NT14 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0281-BSD1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 20:01							
2,4-Dinitrophenol	1690	100	200	ug/kg	2750		61.5	13-160	18.90	30	
Dibenzofuran	442	20.0	20.0	ug/kg	500		88.4	43-120	12.20	30	
4-Nitrophenol	1740	50.0	100	ug/kg	1500		116	18-154	14.50	30	Q
2,4-Dinitrotoluene	1750	50.0	100	ug/kg	1500		117	44-150	13.30	30	
Fluorene	494	20.0	20.0	ug/kg	500		98.7	40-120	12.90	30	
4-Chlorophenylphenyl ether	467	35.0	50.0	ug/kg	500		93.4	36-141	12.70	30	
Diethyl phthalate	535	35.0	50.0	ug/kg	500		107	43-140	3.20	30	
4-Nitroaniline	1470	50.0	100	ug/kg	1500		98.2	15-120	14.10	30	
4,6-Dinitro-2-methylphenol	2690	100	200	ug/kg	2750		97.8	33-144	14.30	30	
N-Nitrosodiphenylamine	534	10.0	20.0	ug/kg	500		107	17-120	13.20	30	
4-Bromophenyl phenyl ether	488	20.0	20.0	ug/kg	500		97.5	39-120	13.70	30	
Hexachlorobenzene	443	20.0	20.0	ug/kg	500		88.6	33-120	8.35	30	
Pentachlorophenol	1180	50.0	100	ug/kg	1500		78.4	33-133	15.80	30	
Phenanthrene	505	10.0	20.0	ug/kg	500		101	49-120	14.70	30	
Anthracene	516	10.0	20.0	ug/kg	500		103	37-120	12.80	30	
Carbazole	548	10.0	20.0	ug/kg	500		110	30-135	13.70	30	
Di-n-Butylphthalate	574	10.0	20.0	ug/kg	500		115	48-126	14.00	30	
Fluoranthene	565	10.0	20.0	ug/kg	500		113	38-127	9.38	30	
Pyrene	543	10.0	20.0	ug/kg	500		109	39-122	8.14	30	
Butylbenzylphthalate	629	10.0	20.0	ug/kg	500		126	45-132	9.23	30	
Benzo(a)anthracene	513	10.0	20.0	ug/kg	500		103	44-120	9.99	30	
3,3'-Dichlorobenzidine	924	50.0	100	ug/kg	1000		92.4	10-120	18.80	30	Q
Chrysene	523	10.0	20.0	ug/kg	500		105	47-120	11.80	30	
bis(2-Ethylhexyl)phthalate	567	40.0	50.0	ug/kg	500		113	10-130	12.40	30	
Di-n-Octylphthalate	530	10.0	20.0	ug/kg	500		106	10-124	14.00	30	
Benzofluoranthenes, Total	973	30.0	40.0	ug/kg	1000		97.3	30-160	12.60	30	
Benzo(a)pyrene	568	10.0	20.0	ug/kg	500		114	37-120	10.20	30	
Indeno(1,2,3-cd)pyrene	700	20.0	20.0	ug/kg	500		140	30-160	7.83	30	Q
Dibenzo(a,h)anthracene	690	20.0	20.0	ug/kg	500		138	30-160	10.10	30	Q
Benzo(g,h,i)perylene	638	20.0	20.0	ug/kg	500		128	10-150	9.13	30	Q
Pyridine	915	100	100	ug/kg	1500		61.0	10-147	11.00	30	
1-Methylnaphthalene	429	10.0	20.0	ug/kg	500		85.7	42-120	13.50	30	
Surrogate: 2-Fluorophenol	808			ug/kg	*750*		*108*	*27-120*			
Surrogate: Phenol-d5	827			ug/kg	*750*		*110*	*29-120*			
Surrogate: 2-Chlorophenol-d4	799			ug/kg	*750*		*107*	*31-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - Quality Control

Batch BMK0281 - EPA 8270E

Instrument: NT14 Analyst: RJL

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0281-BSD1)	Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 20:01										
Surrogate: 1,2-Dichlorobenzene-d4	504			ug/kg	*500*		*101*	*32-120*			
Surrogate: Nitrobenzene-d5	562			ug/kg	*500*		*112*	*30-120*			
Surrogate: 2-Fluorobiphenyl	529			ug/kg	*500*		*106*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	774			ug/kg	*750*		*103*	*24-134*			
Surrogate: p-Terphenyl-d14	571			ug/kg	*500*		*114*	*37-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMK0278 - EPA 8270E-SIM

Instrument: NT17 Analyst: JZ

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0278-BLK1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 21:35							
Naphthalene	ND	2.50	5.00	ug/kg							U
2-Methylnaphthalene	ND	2.50	5.00	ug/kg							U
1-Methylnaphthalene	ND	2.50	5.00	ug/kg							U
Acenaphthylene	ND	2.50	5.00	ug/kg							U
Acenaphthene	ND	2.50	5.00	ug/kg							U
Dibenzofuran	ND	2.50	5.00	ug/kg							U
Fluorene	ND	2.50	5.00	ug/kg							U
Phenanthrene	ND	2.50	5.00	ug/kg							U
Anthracene	ND	2.50	5.00	ug/kg							U
Fluoranthene	ND	2.50	5.00	ug/kg							U
Pyrene	ND	2.50	5.00	ug/kg							U
Benzo(a)anthracene	ND	2.50	5.00	ug/kg							U
Chrysene	ND	2.50	5.00	ug/kg							U
Benzo(b)fluoranthene	ND	2.50	5.00	ug/kg							U
Benzo(k)fluoranthene	ND	2.50	5.00	ug/kg							U
Benzo(j)fluoranthene	ND	2.50	5.00	ug/kg							U
Benzofluoranthenes, Total	ND	7.50	15.0	ug/kg							U
Benzo(a)pyrene	ND	2.50	5.00	ug/kg							U
Indeno(1,2,3-cd)pyrene	ND	2.50	5.00	ug/kg							U
Dibenzo(a,h)anthracene	ND	2.50	5.00	ug/kg							U
Benzo(g,h,i)perylene	ND	2.50	5.00	ug/kg							U
Surrogate: 2-Methylnaphthalene-d10	109			ug/kg	*150*		*72.9*	*32-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	352			ug/kg	*150*		*235*	*21-133*			*
Surrogate: Fluoranthene-d10	149			ug/kg	*150*		*99.3*	*36-134*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Semivolatile Organic Compounds - SIM - Quality Control

Batch BMK0278 - EPA 8270E-SIM

Instrument: NT17 Analyst: JZ

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0278-BSD1)	Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 22:36										
Naphthalene	202	2.50	5.00	ug/kg	300		67.3	23-120	200.00	30	*
2-Methylnaphthalene	214	2.50	5.00	ug/kg	300		71.3	25-120	200.00	30	*
1-Methylnaphthalene	215	2.50	5.00	ug/kg	300		71.6	26-120	200.00	30	*
Acenaphthylene	206	2.50	5.00	ug/kg	300		68.5	16-120	200.00	30	*
Acenaphthene	206	2.50	5.00	ug/kg	300		68.7	23-120	200.00	30	*
Dibenzofuran	236	2.50	5.00	ug/kg	300		78.6	26-120	200.00	30	*
Fluorene	248	2.50	5.00	ug/kg	300		82.5	27-120	200.00	30	*
Phenanthrene	248	2.50	5.00	ug/kg	300		82.7	30-120	200.00	30	*
Anthracene	235	2.50	5.00	ug/kg	300		78.5	22-120	200.00	30	*
Fluoranthene	307	2.50	5.00	ug/kg	300		102	31-120	200.00	30	*
Pyrene	319	2.50	5.00	ug/kg	300		106	30-120	200.00	30	*
Benzo(a)anthracene	306	2.50	5.00	ug/kg	300		102	32-120	200.00	30	*
Chrysene	286	2.50	5.00	ug/kg	300		95.4	35-120	200.00	30	*
Benzo(b)fluoranthene	571	2.50	5.00	ug/kg	300		190	25-150	200.00	30	*, E
Benzo(k)fluoranthene	485	2.50	5.00	ug/kg	300		162	30-141	200.00	30	*
Benzo(j)fluoranthene	545	2.50	5.00	ug/kg	300		182	26-143	200.00	30	*, E
Benzofluoranthenes, Total	1620	7.50	15.0	ug/kg	900		180	29-141	200.00	30	*, E
Benzo(a)pyrene	347	2.50	5.00	ug/kg	300		116	19-120	200.00	30	*
Indeno(1,2,3-cd)pyrene	441	2.50	5.00	ug/kg	300		147	36-138	200.00	30	*
Dibenzo(a,h)anthracene	516	2.50	5.00	ug/kg	300		172	35-149	200.00	30	*, E
Benzo(g,h,i)perylene	513	2.50	5.00	ug/kg	300		171	35-144	200.00	30	*, E
Surrogate: 2-Methylnaphthalene-d10	108			ug/kg	*150*		*72.2*	*32-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	399			ug/kg	*150*		*266*	*21-133*			*
Surrogate: Fluoranthene-d10	160			ug/kg	*150*		*107*	*36-134*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMK0088 - NWTPH-Dx

Instrument: FID4 Analyst: NRB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0088-BLK2)				Prepared: 07-Nov-2024 Analyzed: 14-Nov-2024 10:29						
Diesel Range Organics (C12-C24)	ND	5.00	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	10.0	mg/kg							U
Surrogate: o-Terphenyl	11.8		mg/kg	*11.3*		*105*	*50-150*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMK0088 - NWTPH-Dx

Instrument: FID4 Analyst: NRB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0088-BS3)				Prepared: 07-Nov-2024 Analyzed: 15-Nov-2024 09:06						
Diesel Range Organics (C12-C24)	173	5.00	mg/kg	150		115	63-120			
Surrogate: o-Terphenyl	11.9		mg/kg	*11.3*		*106*	*50-150*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Petroleum Hydrocarbons - Quality Control

Batch BMK0088 - NWTPH-Dx

Instrument: FID4 Analyst: NRB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0088-BSD3)				Prepared: 07-Nov-2024 Analyzed: 15-Nov-2024 09:26						
Diesel Range Organics (C12-C24)	178	5.00	mg/kg	150		118	63-120	2.66	30	
Surrogate: o-Terphenyl	12.5		mg/kg	*11.3*		*111*	*50-150*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMK0280 - EPA 8082A

Instrument: ECD7 Analyst: AA

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0280-BLK1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 19:24							
Aroclor 1016	ND	10.0	20.0	ug/kg							U
Aroclor 1221	ND	10.0	20.0	ug/kg							U
Aroclor 1232	ND	10.0	20.0	ug/kg							U
Aroclor 1242	ND	10.0	20.0	ug/kg							U
Aroclor 1248	ND	10.0	20.0	ug/kg							U
Aroclor 1254	ND	10.0	20.0	ug/kg							U
Aroclor 1260	ND	10.0	20.0	ug/kg							U
Aroclor 1262	ND	10.0	20.0	ug/kg							U
Aroclor 1268	ND	10.0	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl	47.6			ug/kg	*40.0*		*119*	*40-133*			
Surrogate: Tetrachlorometaxylene	44.3			ug/kg	*40.0*		*111*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	42.7			ug/kg	*40.0*		*107*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	39.1			ug/kg	*40.0*		*97.8*	*53-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMK0280 - EPA 8082A

Instrument: ECD7 Analyst: AA

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0280-BS1)	Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 19:46										
Aroclor 1016	647	10.0	20.0	ug/kg	500		129	52-120			*
Aroclor 1260	654	10.0	20.0	ug/kg	500		131	57-120			*
Surrogate: Decachlorobiphenyl	51.7			ug/kg	*40.0*		*129*	*40-133*			
Surrogate: Tetrachlorometaxylene	50.6			ug/kg	*40.0*		*126*	*53-120*			*
Surrogate: Decachlorobiphenyl [2C]	46.1			ug/kg	*40.0*		*115*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	43.5			ug/kg	*40.0*		*109*	*53-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Aroclor PCB - Quality Control

Batch BMK0280 - EPA 8082A

Instrument: ECD7 Analyst: AA

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BMK0280-BSD1)				Prepared: 13-Nov-2024 Analyzed: 13-Nov-2024 20:07							
Aroclor 1016	618	10.0	20.0	ug/kg	500		124	52-120	4.57	30	*
Aroclor 1260	640	10.0	20.0	ug/kg	500		128	57-120	2.23	30	*
Surrogate: Decachlorobiphenyl	50.5			ug/kg	*40.0*		*126*	*40-133*			
Surrogate: Tetrachlorometaxylene	48.4			ug/kg	*40.0*		*121*	*53-120*			*
Surrogate: Decachlorobiphenyl [2C]	45.3			ug/kg	*40.0*		*113*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	42.3			ug/kg	*40.0*		*106*	*53-120*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMK0096 - EPA 6020B

Instrument: ICPMS1 Analyst: DOE

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0096-BLK1)					Prepared: 06-Nov-2024 Analyzed: 07-Nov-2024 19:54							
Barium	135	ND	0.11	0.50	mg/kg							U
Beryllium	9	ND	0.02	0.20	mg/kg							U
Chromium	52	ND	0.26	0.50	mg/kg							U
Lead	208	ND	0.05	0.10	mg/kg							U
Silver	107	ND	0.02	0.20	mg/kg							U
Arsenic	75a	ND	0.04	0.20	mg/kg							U
Cadmium	111	ND	0.03	0.10	mg/kg							U
Copper	63	ND	0.17	0.50	mg/kg							U
Nickel	60	ND	0.08	0.50	mg/kg							U
Nickel	62	ND	0.22	0.50	mg/kg							U
Selenium	78	ND	0.18	0.50	mg/kg							U
Zinc	66	ND	2.9	6.0	mg/kg							U
Blank (BMK0096-BLK2)					Prepared: 06-Nov-2024 Analyzed: 11-Nov-2024 17:55							
Thallium	205	ND	0.02	0.20	mg/kg							U
Blank (BMK0096-BLK3)					Prepared: 06-Nov-2024 Analyzed: 12-Nov-2024 18:58							
Antimony	121	ND	0.10	0.20	mg/kg							U
LCS (BMK0096-BS1)					Prepared: 06-Nov-2024 Analyzed: 07-Nov-2024 20:04							
Barium	135	24.2	0.11	0.50	mg/kg	25.0		96.8	80-120			
Beryllium	9	23.4	0.02	0.20	mg/kg	25.0		93.8	80-120			
Chromium	52	23.2	0.26	0.50	mg/kg	25.0		92.8	80-120			
Lead	208	25.1	0.05	0.10	mg/kg	25.0		100	80-120			
Silver	107	25.0	0.02	0.20	mg/kg	25.0		100	80-120			
Arsenic	75a	23.5	0.04	0.20	mg/kg	25.0		94.0	80-120			
Cadmium	111	25.1	0.03	0.10	mg/kg	25.0		101	80-120			
Copper	63	25.3	0.17	0.50	mg/kg	25.0		101	80-120			
Nickel	60	25.1	0.08	0.50	mg/kg	25.0		100	80-120			
Nickel	62	25.0	0.22	0.50	mg/kg	25.0		99.9	80-120			
Selenium	78	73.9	0.18	0.50	mg/kg	80.0		92.4	80-120			
Zinc	66	78.2	2.9	6.0	mg/kg	80.0		97.8	80-120			
LCS (BMK0096-BS2)					Prepared: 06-Nov-2024 Analyzed: 11-Nov-2024 18:05							
Thallium	205	24.9	0.02	0.20	mg/kg	25.0		99.7	80-120			
LCS (BMK0096-BS3)					Prepared: 06-Nov-2024 Analyzed: 12-Nov-2024 19:05							

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMK0096 - EPA 6020B

Instrument: ICPMS1 Analyst: HAL

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0096-BS3)					Prepared: 06-Nov-2024 Analyzed: 12-Nov-2024 19:05							
Antimony	121	24.9	0.10	0.20	mg/kg	25.0		99.7	80-120			
Duplicate (BMK0096-DUP1)			**Source: 24K0069-01**		Prepared: 06-Nov-2024 Analyzed: 07-Nov-2024 20:14							
Barium	135	39.8	0.12	0.50	mg/kg		40.5			1.68	20	
Beryllium	9	0.20	0.02	0.20	mg/kg		0.15			27.00	20	L, J
Lead	208	5.14	0.05	0.10	mg/kg		4.65			9.99	20	
Silver	107	0.06	0.02	0.20	mg/kg		0.03			65.20	20	L, J
Arsenic	75a	4.00	0.04	0.20	mg/kg		3.09			25.50	20	*
Cadmium	111	0.09	0.03	0.10	mg/kg		0.08			13.60	20	J
Copper	63	23.5	0.18	0.50	mg/kg		12.1			64.40	20	*
Nickel	62	38.2	0.22	0.50	mg/kg		27.0			34.30	20	*
Selenium	78	0.54	0.18	0.50	mg/kg		0.64			17.20	20	
Zinc	66	37.8	2.9	6.1	mg/kg		34.6			8.85	20	
Duplicate (BMK0096-DUP2)			**Source: 24K0069-01**		Prepared: 06-Nov-2024 Analyzed: 11-Nov-2024 19:31							
Chromium	52	23.2	1.31	2.52	mg/kg		21.3			8.56	20	D
Duplicate (BMK0096-DUP3)			**Source: 24K0069-01RE1**		Prepared: 06-Nov-2024 Analyzed: 11-Nov-2024 20:32							
Thallium	205	0.03	0.02	0.20	mg/kg		0.03			6.57	20	J
Duplicate (BMK0096-DUP4)			**Source: 24K0069-01**		Prepared: 06-Nov-2024 Analyzed: 12-Nov-2024 19:13							
Antimony	121	0.13	0.10	0.20	mg/kg		ND				20	J
Matrix Spike (BMK0096-MS1)			**Source: 24K0069-01**		Prepared: 06-Nov-2024 Analyzed: 07-Nov-2024 20:19							
Barium	135	64.3	0.11	0.50	mg/kg	25.1	40.5	94.6	75-125			
Beryllium	9	23.9	0.02	0.20	mg/kg	25.1	0.15	94.4	75-125			
Lead	208	28.5	0.05	0.10	mg/kg	25.1	4.65	94.9	75-125			
Silver	107	23.9	0.02	0.20	mg/kg	25.1	0.03	95.0	75-125			
Arsenic	75a	26.1	0.04	0.20	mg/kg	25.1	3.09	91.5	75-125			
Cadmium	111	24.7	0.03	0.10	mg/kg	25.1	0.08	98.0	75-125			
Copper	63	36.3	0.18	0.50	mg/kg	25.1	12.1	96.3	75-125			
Nickel	62	51.4	0.22	0.50	mg/kg	25.1	27.0	96.9	75-125			
Selenium	78	73.4	0.18	0.50	mg/kg	80.5	0.64	90.4	75-125			
Zinc	66	109	2.9	6.0	mg/kg	80.5	34.6	92.3	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike (BMK0096-MS2)		**Source: 24K0069-01**		Prepared: 06-Nov-2024 Analyzed: 11-Nov-2024 19:36	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMK0096 - EPA 6020B

Instrument: ICPMS1 Analyst: HAL

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BMK0096-MS2)			**Source: 24K0069-01**		Prepared: 06-Nov-2024 Analyzed: 11-Nov-2024 19:36							
Chromium	52	44.2	1.31	2.51	mg/kg	25.1	21.3	91.0	75-125			D
Recovery limits for target analytes in MS/MSD QC samples are advisory only.												
Matrix Spike (BMK0096-MS3)			**Source: 24K0069-01RE1**		Prepared: 06-Nov-2024 Analyzed: 11-Nov-2024 20:37							
Thallium	205	24.9	0.02	0.20	mg/kg	25.1	0.03	99.0	75-125			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.												
Matrix Spike (BMK0096-MS4)			**Source: 24K0069-01**		Prepared: 06-Nov-2024 Analyzed: 12-Nov-2024 19:17							
Antimony	121	4.03	0.10	0.20	mg/kg	25.1	ND	16.0	75-125			*
Recovery limits for target analytes in MS/MSD QC samples are advisory only.												

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Analysis by: Analytical Resources, LLC

Metals and Metallic Compounds - Quality Control

Batch BMK0105 - EPA 7471B

Instrument: HYDRA Analyst: ML

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0105-BLK1)				Prepared: 05-Nov-2024 Analyzed: 12-Nov-2024 12:18							
Mercury	ND	0.00525	0.0250	mg/kg							U
LCS (BMK0105-BS1)				Prepared: 05-Nov-2024 Analyzed: 12-Nov-2024 12:20							
Mercury	0.507	0.00525	0.0250	mg/kg	0.500		101	80-120			
Duplicate (BMK0105-DUP1)		**Source: 24K0069-01**		Prepared: 05-Nov-2024 Analyzed: 12-Nov-2024 13:41							
Mercury	0.0218	0.00409	0.0195	mg/kg		0.0224			2.75	20	
Matrix Spike (BMK0105-MS1)		**Source: 24K0069-01**		Prepared: 05-Nov-2024 Analyzed: 12-Nov-2024 13:43							
Mercury	0.269	0.00406	0.0193	mg/kg	0.193	0.0224	127	75-125			*
Recovery limits for target analytes in MS/MSD QC samples are advisory only.											
Post Spike (BMK0105-PS1)		**Source: 24K0069-01**		Prepared: 05-Nov-2024 Analyzed: 12-Nov-2024 15:21							
Mercury	0.00132			mg/kg	0.00100	0.0224	121	0-200			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Certified Analyses included in this Report

Analyte	Certifications
EPA 6020B in Solid	
Silver-107	NELAP,DoD-ELAP,WADOE
Barium-135	NELAP,DoD-ELAP,WADOE,ADEC
Beryllium-9	NELAP,DoD-ELAP,WADOE
Chromium-52	NELAP,DoD-ELAP,WADOE,ADEC
Lead-208	NELAP,DoD-ELAP,WADOE,ADEC
Antimony-121	NELAP,DoD-ELAP,WADOE
Thallium-205	NELAP,DoD-ELAP,WADOE
EPA 6020B UCT-KED in Solid	
Arsenic-75a	NELAP,DoD-ELAP,WADOE,ADEC
Cadmium-111	NELAP,DoD-ELAP,WADOE,ADEC
Copper-63	NELAP,DoD-ELAP,WADOE
Nickel-60	NELAP,DoD-ELAP,WADOE,ADEC
Nickel-62	NELAP,DoD-ELAP,WADOE,ADEC
Selenium-78	NELAP,DoD-ELAP,WADOE
Zinc-66	NELAP,DoD-ELAP,WADOE
EPA 7471B in Solid	
Mercury	WADOE,NELAP,DoD-ELAP
EPA 8082A in Solid	
Aroclor 1016	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,ADEC

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,ADEC
EPA 8260D in Solid	
Chloromethane	WADOE,DoD-ELAP,NELAP,ADEC
Vinyl Chloride	WADOE,DoD-ELAP,NELAP,ADEC
Bromomethane	WADOE,DoD-ELAP,NELAP,ADEC
Chloroethane	WADOE,DoD-ELAP,NELAP,ADEC
Trichlorofluoromethane	WADOE,DoD-ELAP,NELAP,ADEC
Acrolein	WADOE,DoD-ELAP,NELAP
1,1,2-Trichloro-1,2,2-Trifluoroeth	WADOE,DoD-ELAP,NELAP,ADEC
Acetone	WADOE,DoD-ELAP,NELAP
1,1-Dichloroethene	WADOE,DoD-ELAP,NELAP,ADEC
Iodomethane	WADOE,DoD-ELAP,NELAP,ADEC
Methylene Chloride	WADOE,DoD-ELAP,NELAP,ADEC
Acrylonitrile	WADOE,DoD-ELAP,NELAP
Carbon Disulfide	WADOE,DoD-ELAP,NELAP,ADEC
trans-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,ADEC
Vinyl Acetate	WADOE,DoD-ELAP,NELAP
1,1-Dichloroethane	WADOE,DoD-ELAP,NELAP,ADEC
2-Butanone	WADOE,DoD-ELAP,NELAP
2,2-Dichloropropane	WADOE,DoD-ELAP,NELAP
cis-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,ADEC
Chloroform	WADOE,DoD-ELAP,NELAP,ADEC
Bromochloromethane	WADOE,DoD-ELAP,NELAP,ADEC
1,1,1-Trichloroethane	WADOE,DoD-ELAP,NELAP,ADEC
1,1-Dichloropropene	WADOE,DoD-ELAP,NELAP,ADEC
Carbon tetrachloride	WADOE,DoD-ELAP,NELAP,ADEC
1,2-Dichloroethane	WADOE,DoD-ELAP,NELAP,ADEC

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Benzene	WADOE,DoD-ELAP,NELAP,ADEC
Trichloroethene	WADOE,DoD-ELAP,NELAP,ADEC
1,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,ADEC
Bromodichloromethane	WADOE,DoD-ELAP,NELAP,ADEC
Dibromomethane	WADOE,DoD-ELAP,NELAP,ADEC
2-Chloroethyl vinyl ether	WADOE,DoD-ELAP,NELAP
4-Methyl-2-Pentanone	WADOE,DoD-ELAP,NELAP
cis-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,ADEC
Toluene	WADOE,DoD-ELAP,NELAP,ADEC
trans-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,ADEC
2-Hexanone	WADOE,DoD-ELAP,NELAP
1,1,2-Trichloroethane	WADOE,DoD-ELAP,NELAP,ADEC
1,3-Dichloropropane	WADOE,DoD-ELAP,NELAP,ADEC
Tetrachloroethene	WADOE,DoD-ELAP,NELAP,ADEC
Dibromochloromethane	WADOE,DoD-ELAP,NELAP,ADEC
1,2-Dibromoethane	WADOE,DoD-ELAP,NELAP,ADEC
Chlorobenzene	WADOE,DoD-ELAP,NELAP,ADEC
Ethylbenzene	WADOE,DoD-ELAP,NELAP,ADEC
1,1,1,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,ADEC
m,p-Xylene	WADOE,DoD-ELAP,NELAP,ADEC
o-Xylene	WADOE,DoD-ELAP,NELAP,ADEC
Xylenes, total	WADOE
Styrene	WADOE,DoD-ELAP,NELAP,ADEC
Bromoform	WADOE,DoD-ELAP,NELAP,ADEC
1,1,2,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,ADEC
1,2,3-Trichloropropane	WADOE,DoD-ELAP,NELAP,ADEC
trans-1,4-Dichloro 2-Butene	WADOE,DoD-ELAP,NELAP
n-Propylbenzene	WADOE,DoD-ELAP,NELAP
Bromobenzene	WADOE,DoD-ELAP,NELAP,ADEC
Isopropyl Benzene	WADOE,DoD-ELAP,NELAP,ADEC
2-Chlorotoluene	WADOE,DoD-ELAP,NELAP
4-Chlorotoluene	WADOE,DoD-ELAP,NELAP
t-Butylbenzene	WADOE,DoD-ELAP,NELAP

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

1,3,5-Trimethylbenzene	WADOE,DoD-ELAP,NELAP
1,2,4-Trimethylbenzene	WADOE,DoD-ELAP,NELAP
s-Butylbenzene	WADOE,DoD-ELAP,NELAP
4-Isopropyl Toluene	WADOE,DoD-ELAP,NELAP
1,3-Dichlorobenzene	WADOE,DoD-ELAP,NELAP
1,4-Dichlorobenzene	WADOE,DoD-ELAP,NELAP
n-Butylbenzene	WADOE,DoD-ELAP,NELAP
1,2-Dichlorobenzene	WADOE,DoD-ELAP,NELAP
1,2-Dibromo-3-chloropropane	WADOE,DoD-ELAP,NELAP,ADEC
1,2,4-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,ADEC
Hexachloro-1,3-Butadiene	WADOE,DoD-ELAP,NELAP,ADEC
Naphthalene	WADOE,DoD-ELAP,NELAP
1,2,3-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,ADEC
Dichlorodifluoromethane	WADOE,DoD-ELAP,NELAP,ADEC
Methyl tert-butyl Ether	WADOE,DoD-ELAP,NELAP
2-Pentanone	WADOE
4-Bromofluorobenzene	WADOE

EPA 8260D in Water

Chloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Acrolein	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroeth	DoD-ELAP,ADEC,NELAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Iodomethane	DoD-ELAP,NELAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,WADOE

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Butanone	DoD-ELAP,NELAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,WADOE
Styrene	DoD-ELAP,NELAP,WADOE
Bromoform	DoD-ELAP,NELAP,WADOE

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,WADOE
2-Pentanone	WADOE

EPA 8270E in Solid

Phenol	DoD-ELAP,NELAP,WADOE
bis(2-chloroethyl) ether	DoD-ELAP,NELAP,WADOE
2-Chlorophenol	DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,NELAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,NELAP,WADOE
Benzyl Alcohol	DoD-ELAP,NELAP,WADOE

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

2,2'-Oxybis(1-chloropropane)	DoD-ELAP,NELAP
2-Methylphenol	DoD-ELAP,NELAP,WADOE
Hexachloroethane	DoD-ELAP,NELAP,WADOE
N-Nitroso-di-n-Propylamine	DoD-ELAP,NELAP,WADOE
4-Methylphenol	DoD-ELAP,NELAP,WADOE
Nitrobenzene	DoD-ELAP,NELAP,WADOE
Isophorone	DoD-ELAP,NELAP,WADOE
2-Nitrophenol	DoD-ELAP,NELAP,WADOE
2,4-Dimethylphenol	DoD-ELAP,NELAP,WADOE
Bis(2-Chloroethoxy)methane	DoD-ELAP,NELAP,WADOE
2,4-Dichlorophenol	DoD-ELAP,NELAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,NELAP,WADOE
Naphthalene	DoD-ELAP,NELAP,WADOE,ADEC
Benzoic acid	DoD-ELAP,NELAP,WADOE
4-Chloroaniline	DoD-ELAP,NELAP,WADOE
Hexachlorobutadiene	DoD-ELAP,NELAP,WADOE
4-Chloro-3-Methylphenol	DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	DoD-ELAP,NELAP,WADOE,ADEC
Hexachlorocyclopentadiene	DoD-ELAP,NELAP,WADOE
2,4,6-Trichlorophenol	DoD-ELAP,NELAP,WADOE
2,4,5-Trichlorophenol	DoD-ELAP,NELAP,WADOE
2-Chloronaphthalene	DoD-ELAP,NELAP,WADOE
2-Nitroaniline	DoD-ELAP,NELAP,WADOE
Acenaphthylene	DoD-ELAP,NELAP,WADOE,ADEC
Dimethylphthalate	DoD-ELAP,NELAP,WADOE
2,6-Dinitrotoluene	DoD-ELAP,NELAP,WADOE
Acenaphthene	DoD-ELAP,NELAP,WADOE,ADEC
3-Nitroaniline	DoD-ELAP,NELAP,WADOE
2,4-Dinitrophenol	DoD-ELAP,NELAP,WADOE
Dibenzofuran	DoD-ELAP,NELAP,WADOE,ADEC
4-Nitrophenol	DoD-ELAP,NELAP,WADOE
2,4-Dinitrotoluene	DoD-ELAP,NELAP,WADOE
Fluorene	DoD-ELAP,NELAP,WADOE,ADEC

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

4-Chlorophenylphenyl ether	DoD-ELAP,NELAP
Diethyl phthalate	DoD-ELAP,NELAP,WADOE
4-Nitroaniline	DoD-ELAP,NELAP,WADOE
4,6-Dinitro-2-methylphenol	DoD-ELAP,NELAP,WADOE
N-Nitrosodiphenylamine	DoD-ELAP,NELAP,WADOE
4-Bromophenyl phenyl ether	DoD-ELAP,NELAP,WADOE
Hexachlorobenzene	DoD-ELAP,NELAP,WADOE
Pentachlorophenol	DoD-ELAP,NELAP,WADOE
Phenanthrene	DoD-ELAP,NELAP,WADOE,ADEC
Anthracene	DoD-ELAP,NELAP,WADOE,ADEC
Carbazole	DoD-ELAP,NELAP,WADOE,ADEC
Di-n-Butylphthalate	DoD-ELAP,NELAP,WADOE
Fluoranthene	DoD-ELAP,NELAP,WADOE,ADEC
Pyrene	DoD-ELAP,NELAP,WADOE,ADEC
Butylbenzylphthalate	DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	DoD-ELAP,NELAP,WADOE,ADEC
3,3'-Dichlorobenzidine	DoD-ELAP,NELAP,WADOE
Chrysene	DoD-ELAP,NELAP,WADOE,ADEC
bis(2-Ethylhexyl)phthalate	DoD-ELAP,NELAP,WADOE
Di-n-Octylphthalate	DoD-ELAP,NELAP,WADOE
Benzofluoranthenes, Total	WADOE,ADEC
Benzo(a)pyrene	DoD-ELAP,NELAP,WADOE,ADEC
Indeno(1,2,3-cd)pyrene	DoD-ELAP,NELAP,WADOE,ADEC
Dibenzo(a,h)anthracene	DoD-ELAP,NELAP,WADOE,ADEC
Benzo(g,h,i)perylene	DoD-ELAP,NELAP,WADOE,ADEC
Pyridine	DoD-ELAP,NELAP,WADOE
1-Methylnaphthalene	DoD-ELAP,NELAP,WADOE,ADEC
EPA 8270E-SIM in Solid	
Naphthalene	ADEC,DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthylene	ADEC,DoD-ELAP,NELAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,WADOE

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Dibenzofuran	ADEC,DoD-ELAP,NELAP
Fluorene	ADEC,DoD-ELAP,NELAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,WADOE
NWTPH-Dx in Solid	
Diesel Range Organics (C12-C2	DoD-ELAP,NELAP,WADOE
Motor Oil Range Organics (C24-	DoD-ELAP,NELAP,WADOE
NWTPHg in Solid	
Gasoline Range Organics (Tol-N	DoD-ELAP
NWTPHg in Water	
Gasoline Range Organics (Tol-N	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2025
WADOE	WA Dept of Ecology	C558	06/30/2025
WA-DW	Ecology - Drinking Water	C558	06/30/2025

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	21-Nov-2024 09:38

Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
D	The reported value is from a dilution
D1	Surrogate was not detected due to sample extract dilution
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
J	Estimated concentration value detected below the reporting limit.
L	Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

26 December 2024

Abhijit R. Joshi
GeoEngineers
17425 Union Hill Road Suite 250
Redmond, WA 98052

RE: POE Marine Terminal SW Improvements (0676-020-07)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
24K0072	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC



Susan Dunnihoo, Director, Client Services

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 24K0072	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: GEOENGINEERS	Phone: 206.437.6819	Date: 11.4.24	Ice Present?
Client Contact: ABHIJIT JOSHI		No. of Coolers: 1	Cooler Temps: 1.4
Client Project Name: POE - MARINE TERMINAL SW IMPROVEMENTS			
Client Project #: 0676-020-04	Samplers: NATHAN SOLOMON		

Analytical Resources, LLC
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Dioxins/Furans	Notes/Comments
SP-1-F	11.4.24	1230	SOIL	1	X	
SP-1-G		1235		1	X	
SP-1-H		1240		1	X	
SP-1-I		1245		1	X	
SP-1-J		1250		1	X	
SP-1-K		1255		1	X	
SP-1-L		1300		1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: NATHAN SOLOMON	Printed Name: R Leesemann	Printed Name:	Printed Name:
	Company: GEI	Company: ARI	Company:	Company:
	Date & Time: 11.04.24 1456	Date & Time: 11-4-24 1500	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1-F	24K0072-01	Solid	04-Nov-2024 12:30	04-Nov-2024 15:00
SP-1-G	24K0072-02	Solid	04-Nov-2024 12:35	04-Nov-2024 15:00
SP-1-H	24K0072-03	Solid	04-Nov-2024 12:40	04-Nov-2024 15:00
SP-1-I	24K0072-04	Solid	04-Nov-2024 12:45	04-Nov-2024 15:00
SP-1-J	24K0072-05	Solid	04-Nov-2024 12:50	04-Nov-2024 15:00
SP-1-K	24K0072-06	Solid	04-Nov-2024 12:55	04-Nov-2024 15:00
SP-1-L	24K0072-07	Solid	04-Nov-2024 13:00	04-Nov-2024 15:00

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

Work Order Case Narrative

Client: GeoEngineers
Project: POE Marine Terminal SW Improvements
Work Order: 24K0072

Sample receipt

Samples as listed on the preceding page were received 04-Nov-2024 15:00 under ARI work order 24K0072. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Dioxin/Furans - EPA Method 1613

The sample(s) were extracted and analyzed within the recommended holding times. Analysis was performed using an application specific column developed by Restek. The RTX-Dioxin2 column has unique isomer separation for the 2378-TCDF, eliminating the need for confirmation analysis.

Initial and continuing calibrations were within method requirements.

Labeled internal standard areas were within limits.

The cleanup surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits with low-level response for OCDD. Associated results have been "B"-flagged.

The OPR (Ongoing Precision and Recovery) standard percent recoveries were within control limits.

The reference material (SRM) percent recoveries were within control limits.

The duplicate (DUP) relative percent differences (RPD) outside of advisory control limits are flagged on the summary sheet.

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Geo Engineers Project Name: POE Marine Terminal SW

COC No(s): (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 24K0072 Tracking No: (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) Time ____ 1.4 ____ ____ ____ ____ ____ ____	Temp Gun ID#:	J009708
Was a temperature blank included in the cooler?	YES	(NO)
Were coolers received between 0°- 6° (°C)	(YES)	NO
Was sufficient ice used (if appropriate)?	NA (YES)	NO

Cooler Accepted by: RL Date: 11-4-24 Time: 1500

Complete custody forms and attach all shipping documents

Log-In Phase:

What kind of packing material was used? Bubble Wrap ~~Wet Ice~~ Gel Packs Baggies Foam Block N/A Other: ____

Are any samples that were out of temperature compliance documented in LIMS?		YES	(NO)
How were bottles sealed in plastic bags?	Individually	Grouped	(Not)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		YES	(NO)
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Were the sample(s) split by ARI? (NA) YES Date/Time: ____ Equipment: ____ Split by: ____

Samples Logged by: SA Date: 11/05/24 Time: 1017 Labels checked by: SA

***** Notify Project Manager of discrepancies or concerns *****

Additional Notes, Discrepancies, & Resolutions:

By: Date:

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-F

24K0072-01 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:30
Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/18/2024 01:47

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24K0072-01 A 01
	Preparation Batch: BMK0254	Sample Size: 10.75 g (wet)	Dry Weight:10.01 g
	Prepared: 11/13/2024	Final Volume: 20 uL	% Solids: 93.13
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24K0072-01 A 01
	Cleanup Batch: CMK0114	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0072-01 A 01
	Cleanup Batch: CMK0112	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24K0072-01 A 01
	Cleanup Batch: CMK0113	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.742	0.655-0.886		0.999	**15.7**	ng/kg	
2,3,7,8-TCDD			0.655-0.886	0.143	0.999	ND	ng/kg	U
1,2,3,7,8-PeCDF		2.128	1.318-1.783		0.999	**0.553**	ng/kg	EMPC, J
2,3,4,7,8-PeCDF		1.056	1.318-1.783		0.999	**0.518**	ng/kg	EMPC, J
1,2,3,7,8-PeCDD		1.430	1.318-1.783		0.999	**0.408**	ng/kg	J
1,2,3,4,7,8-HxCDF		1.126	1.054-1.426		0.999	**0.238**	ng/kg	J
1,2,3,6,7,8-HxCDF		1.676	1.054-1.426		0.999	**0.202**	ng/kg	EMPC, J
2,3,4,6,7,8-HxCDF		1.130	1.054-1.426		0.999	**0.193**	ng/kg	J
1,2,3,7,8,9-HxCDF			1.054-1.426	0.140	0.999	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	0.160	0.999	ND	ng/kg	U
1,2,3,6,7,8-HxCDD		1.016	1.054-1.426		0.999	**0.454**	ng/kg	EMPC, J
1,2,3,7,8,9-HxCDD		1.080	1.054-1.426		0.999	**0.518**	ng/kg	J
1,2,3,4,6,7,8-HpCDF		1.049	0.893-1.208		0.999	**1.46**	ng/kg	
1,2,3,4,7,8,9-HpCDF			0.893-1.208	0.141	0.999	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDD		1.086	0.893-1.208		2.50	**4.77**	ng/kg	
OCDF		1.028	0.757-1.024		2.50	**1.05**	ng/kg	EMPC, J
OCDD		0.847	0.757-1.024		9.99	**25.5**	ng/kg	B
Homologue groups								
Total TCDF					0.999	**25.2**	ng/kg	
Total TCDD					0.999	**11.1**	ng/kg	
Total PeCDF					0.999	**1.81**	ng/kg	
Total PeCDD					0.999	**5.56**	ng/kg	
Total HxCDF					0.999	**1.26**	ng/kg	
Total HxCDD					0.999	**8.61**	ng/kg	
Total HpCDF					0.999	**2.91**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-F

24K0072-01 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:30

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/18/2024 01:47

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total HpCDD				0.999	**10.2**	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):	2.47
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):	2.38
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):	2.35
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):	2.14

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-F

24K0072-01 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:30

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/18/2024 01:47

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.802*	*0.655-0.886*	*24-169 %*	*63.3*	*%*	
13C12-2,3,7,8-TCDD		*0.816*	*0.655-0.886*	*25-164 %*	*67.2*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.505*	*1.318-1.783*	*24-185 %*	*75.7*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.494*	*1.318-1.783*	*21-178 %*	*70.0*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.592*	*1.318-1.783*	*25-181 %*	*67.6*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.538*	*0.434-0.587*	*26-152 %*	*61.5*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.550*	*0.434-0.587*	*26-123 %*	*54.4*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.544*	*0.434-0.587*	*28-136 %*	*60.2*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.544*	*0.434-0.587*	*29-147 %*	*63.8*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.240*	*1.054-1.426*	*32-141 %*	*64.7*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.213*	*1.054-1.426*	*28-130 %*	*56.8*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.432*	*0.374-0.506*	*28-143 %*	*58.1*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.443*	*0.374-0.506*	*26-138 %*	*62.0*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.096*	*0.893-1.208*	*23-140 %*	*68.0*	*%*	
13C12-OCDD		*0.920*	*0.757-1.024*	*17-157 %*	*73.0*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*84.4*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-F

24K0072-01 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:30

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/18/2024 01:47

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-F

24K0072-01 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 11/04/2024 12:30

Instrument: N/A Analyst: NL — Analyzed: 11/12/2024 04:58

Sample Preparation: Preparation Method: No Prep-Organics — Extract ID: 24K0072-01

Preparation Batch: BMK0224 — Sample Size: 1 g (wet)

Prepared: 11/11/2024 — Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**93.13**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-G

24K0072-02 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:35
Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/18/2024 04:22

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24K0072-02 A 01
	Preparation Batch: BMK0254	Sample Size: 10.85 g (wet)	Dry Weight:10.01 g
	Prepared: 11/13/2024	Final Volume: 20 uL	% Solids: 92.23
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24K0072-02 A 01
	Cleanup Batch: CMK0114	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0072-02 A 01
	Cleanup Batch: CMK0112	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24K0072-02 A 01
	Cleanup Batch: CMK0113	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.757	0.655-0.886		0.999	**1.51**	ng/kg	
2,3,7,8-TCDD		0.356	0.655-0.886		0.999	**0.335**	ng/kg	EMPC, J
1,2,3,7,8-PeCDF			1.318-1.783	0.220	0.999	ND	ng/kg	U
2,3,4,7,8-PeCDF			1.318-1.783	0.224	0.999	ND	ng/kg	U
1,2,3,7,8-PeCDD		0.982	1.318-1.783		0.999	**0.228**	ng/kg	EMPC, J
1,2,3,4,7,8-HxCDF			1.054-1.426	0.113	0.999	ND	ng/kg	U
1,2,3,6,7,8-HxCDF		1.566	1.054-1.426		0.999	**0.270**	ng/kg	EMPC, J
2,3,4,6,7,8-HxCDF		0.560	1.054-1.426		0.999	**0.263**	ng/kg	EMPC, J
1,2,3,7,8,9-HxCDF			1.054-1.426	0.126	0.999	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	0.203	0.999	ND	ng/kg	U
1,2,3,6,7,8-HxCDD		0.678	1.054-1.426		0.999	**0.391**	ng/kg	EMPC, J
1,2,3,7,8,9-HxCDD			1.054-1.426	0.227	0.999	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDF		0.972	0.893-1.208		0.999	**1.72**	ng/kg	
1,2,3,4,7,8,9-HpCDF			0.893-1.208	0.180	0.999	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDD		1.211	0.893-1.208		2.50	**5.25**	ng/kg	EMPC
OCDF		0.674	0.757-1.024		2.50	**1.30**	ng/kg	EMPC, J
OCDD		0.890	0.757-1.024		9.99	**22.0**	ng/kg	B
Homologue groups								
Total TCDF					0.999	**4.09**	ng/kg	
Total TCDD					0.999	**5.41**	ng/kg	
Total PeCDF					0.999	**2.02**	ng/kg	
Total PeCDD					0.999	**3.90**	ng/kg	
Total HxCDF					0.999	**1.60**	ng/kg	
Total HxCDD					0.999	**6.98**	ng/kg	
Total HpCDF					0.999	**3.41**	ng/kg	
Total HpCDD					0.999	**6.24**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-G

24K0072-02 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:35

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/18/2024 04:22

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					0.95		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					0.88		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					0.60		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					0.17		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-G

24K0072-02 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:35

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/18/2024 04:22

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.805*	*0.655-0.886*	*24-169 %*	*65.3*	*%*	
13C12-2,3,7,8-TCDD		*0.797*	*0.655-0.886*	*25-164 %*	*73.3*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.519*	*1.318-1.783*	*24-185 %*	*80.7*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.484*	*1.318-1.783*	*21-178 %*	*77.8*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.600*	*1.318-1.783*	*25-181 %*	*74.1*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.527*	*0.434-0.587*	*26-152 %*	*64.9*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.547*	*0.434-0.587*	*26-123 %*	*58.1*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.522*	*0.434-0.587*	*28-136 %*	*63.7*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.534*	*0.434-0.587*	*29-147 %*	*70.4*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.261*	*1.054-1.426*	*32-141 %*	*67.6*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.168*	*1.054-1.426*	*28-130 %*	*61.5*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.439*	*0.374-0.506*	*28-143 %*	*64.3*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.448*	*0.374-0.506*	*26-138 %*	*63.7*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.151*	*0.893-1.208*	*23-140 %*	*72.7*	*%*	
13C12-OCDD		*0.836*	*0.757-1.024*	*17-157 %*	*67.5*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*97.3*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-G

24K0072-02 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:35

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/18/2024 04:22

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-G

24K0072-02 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 11/04/2024 12:35

Instrument: N/A Analyst: NL — Analyzed: 11/12/2024 04:58

Sample Preparation: Preparation Method: No Prep-Organics — Extract ID: 24K0072-02

Preparation Batch: BMK0224 — Sample Size: 1 g (wet)

Prepared: 11/11/2024 — Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**92.23**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-H

24K0072-03 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:40
Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 16:32

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24K0072-03 A 01
	Preparation Batch: BMK0254	Sample Size: 10.79 g (wet)	Dry Weight:10.01 g
	Prepared: 11/13/2024	Final Volume: 20 uL	% Solids: 92.75
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24K0072-03 A 01
	Cleanup Batch: CMK0114	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0072-03 A 01
	Cleanup Batch: CMK0112	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24K0072-03 A 01
	Cleanup Batch: CMK0113	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.782	0.655-0.886		0.999	**1.52**	ng/kg	X
2,3,7,8-TCDD		0.382	0.655-0.886		0.999	**0.316**	ng/kg	EMPC, J
1,2,3,7,8-PeCDF		1.615	1.318-1.783		0.999	**0.442**	ng/kg	J
2,3,4,7,8-PeCDF		2.344	1.318-1.783		0.999	**0.582**	ng/kg	EMPC, J
1,2,3,7,8-PeCDD		1.681	1.318-1.783		0.999	**0.936**	ng/kg	J
1,2,3,4,7,8-HxCDF		1.304	1.054-1.426		0.999	**0.722**	ng/kg	J
1,2,3,6,7,8-HxCDF		1.297	1.054-1.426		0.999	**0.797**	ng/kg	J
2,3,4,6,7,8-HxCDF		1.188	1.054-1.426		0.999	**0.927**	ng/kg	J
1,2,3,7,8,9-HxCDF			1.054-1.426	0.021	0.999	ND	ng/kg	U
1,2,3,4,7,8-HxCDD		1.243	1.054-1.426		0.999	**0.982**	ng/kg	J
1,2,3,6,7,8-HxCDD		1.234	1.054-1.426		0.999	**2.74**	ng/kg	
1,2,3,7,8,9-HxCDD		1.367	1.054-1.426		0.999	**1.34**	ng/kg	
1,2,3,4,6,7,8-HpCDF		1.055	0.893-1.208		0.999	**11.0**	ng/kg	
1,2,3,4,7,8,9-HpCDF		1.095	0.893-1.208		0.999	**0.691**	ng/kg	J
1,2,3,4,6,7,8-HpCDD		1.074	0.893-1.208		2.50	**178**	ng/kg	
OCDF		0.944	0.757-1.024		2.50	**26.9**	ng/kg	
OCDD		0.881	0.757-1.024		9.99	**810**	ng/kg	B
Homologue groups								
Total TCDF					0.999	**12.4**	ng/kg	
Total TCDD					0.999	**21.3**	ng/kg	
Total PeCDF					0.999	**6.29**	ng/kg	
Total PeCDD					0.999	**17.3**	ng/kg	
Total HxCDF					0.999	**13.0**	ng/kg	
Total HxCDD					0.999	**72.9**	ng/kg	
Total HpCDF					0.999	**37.4**	ng/kg	
Total HpCDD					0.999	**702**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-H

24K0072-03 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:40

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 16:32

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					4.49		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					4.49		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					4.25		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					4.00		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-H

24K0072-03 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:40

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 16:32

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.788*	*0.655-0.886*	*24-169 %*	*80.9*	*%*	
13C12-2,3,7,8-TCDD		*0.805*	*0.655-0.886*	*25-164 %*	*89.7*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.516*	*1.318-1.783*	*24-185 %*	*88.7*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.518*	*1.318-1.783*	*21-178 %*	*81.3*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.577*	*1.318-1.783*	*25-181 %*	*80.2*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.524*	*0.434-0.587*	*26-152 %*	*86.8*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.540*	*0.434-0.587*	*26-123 %*	*75.7*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.533*	*0.434-0.587*	*28-136 %*	*81.3*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.518*	*0.434-0.587*	*29-147 %*	*77.4*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.245*	*1.054-1.426*	*32-141 %*	*87.6*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.222*	*1.054-1.426*	*28-130 %*	*75.4*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.462*	*0.374-0.506*	*28-143 %*	*70.1*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.438*	*0.374-0.506*	*26-138 %*	*63.2*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.086*	*0.893-1.208*	*23-140 %*	*75.2*	*%*	
13C12-OCDD		*0.866*	*0.757-1.024*	*17-157 %*	*62.8*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*103*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-H

24K0072-03 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:40

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 16:32

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-H

24K0072-03 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 11/04/2024 12:40

Instrument: N/A Analyst: NL — Analyzed: 11/12/2024 04:58

Sample Preparation: Preparation Method: No Prep-Organics — Extract ID: 24K0072-03

Preparation Batch: BMK0224 — Sample Size: 1 g (wet)

Prepared: 11/11/2024 — Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**92.75**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-I

24K0072-04 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:45
Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 17:21

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24K0072-04 A 01
	Preparation Batch: BMK0254	Sample Size: 13.75 g (wet)	Dry Weight:10.03 g
	Prepared: 11/13/2024	Final Volume: 20 uL	% Solids: 72.93
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24K0072-04 A 01
	Cleanup Batch: CMK0114	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0072-04 A 01
	Cleanup Batch: CMK0112	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24K0072-04 A 01
	Cleanup Batch: CMK0113	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.799	0.655-0.886		0.997	**3.33**	ng/kg	
2,3,7,8-TCDD			0.655-0.886	0.358	0.997	ND	ng/kg	U
1,2,3,7,8-PeCDF			1.318-1.783	0.030	0.997	ND	ng/kg	U
2,3,4,7,8-PeCDF		1.079	1.318-1.783		0.997	**0.929**	ng/kg	EMPC, J
1,2,3,7,8-PeCDD			1.318-1.783	0.331	0.997	ND	ng/kg	U
1,2,3,4,7,8-HxCDF			1.054-1.426	0.045	0.997	ND	ng/kg	U
1,2,3,6,7,8-HxCDF		2.169	1.054-1.426		0.997	**0.544**	ng/kg	EMPC, J
2,3,4,6,7,8-HxCDF		1.372	1.054-1.426		0.997	**0.545**	ng/kg	J
1,2,3,7,8,9-HxCDF			1.054-1.426	0.057	0.997	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	0.073	0.997	ND	ng/kg	U
1,2,3,6,7,8-HxCDD			1.054-1.426	0.083	0.997	ND	ng/kg	U
1,2,3,7,8,9-HxCDD			1.054-1.426	0.085	0.997	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDF		1.069	0.893-1.208		0.997	**2.79**	ng/kg	
1,2,3,4,7,8,9-HpCDF			0.893-1.208	0.008	0.997	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDD		1.243	0.893-1.208		2.49	**8.49**	ng/kg	EMPC
OCDF		0.626	0.757-1.024		2.49	**0.433**	ng/kg	EMPC, J
OCDD		0.812	0.757-1.024		9.97	**25.9**	ng/kg	B
Homologue groups								
Total TCDF					0.997	**26.7**	ng/kg	
Total TCDD					0.997	**29.6**	ng/kg	
Total PeCDF					0.997	**0.637**	ng/kg	J
Total PeCDD					0.997	**14.8**	ng/kg	
Total HxCDF					0.997	**2.11**	ng/kg	
Total HxCDD					0.997	**28.7**	ng/kg	
Total HpCDF					0.997	**2.79**	ng/kg	
Total HpCDD					0.997	**7.55**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-I

24K0072-04 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:45

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 17:21

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					1.20		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					0.84		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					0.99		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					0.42		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-I

24K0072-04 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:45

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 17:21

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.806*	*0.655-0.886*	*24-169 %*	*72.5*	*%*	
13C12-2,3,7,8-TCDD		*0.805*	*0.655-0.886*	*25-164 %*	*80.2*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.547*	*1.318-1.783*	*24-185 %*	*78.4*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.527*	*1.318-1.783*	*21-178 %*	*70.8*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.593*	*1.318-1.783*	*25-181 %*	*70.7*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.517*	*0.434-0.587*	*26-152 %*	*75.9*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.496*	*0.434-0.587*	*26-123 %*	*71.6*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.512*	*0.434-0.587*	*28-136 %*	*75.1*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.536*	*0.434-0.587*	*29-147 %*	*74.9*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.256*	*1.054-1.426*	*32-141 %*	*78.1*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.258*	*1.054-1.426*	*28-130 %*	*67.0*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.454*	*0.374-0.506*	*28-143 %*	*62.2*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.452*	*0.374-0.506*	*26-138 %*	*55.0*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.107*	*0.893-1.208*	*23-140 %*	*69.2*	*%*	
13C12-OCDD		*0.869*	*0.757-1.024*	*17-157 %*	*61.2*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*94.4*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-I

24K0072-04 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:45

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 17:21

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-I

24K0072-04 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 11/04/2024 12:45

Instrument: N/A Analyst: NL — Analyzed: 11/12/2024 04:58

Sample Preparation: Preparation Method: No Prep-Organics — Extract ID: 24K0072-04

Preparation Batch: BMK0224 — Sample Size: 1 g (wet)

Prepared: 11/11/2024 — Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**72.93**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-J

24K0072-05 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:50
Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 18:11

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24K0072-05 A 01
	Preparation Batch: BMK0254	Sample Size: 10.86 g (wet)	Dry Weight:10.03 g
	Prepared: 11/13/2024	Final Volume: 20 uL	% Solids: 92.38
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24K0072-05 A 01
	Cleanup Batch: CMK0114	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0072-05 A 01
	Cleanup Batch: CMK0112	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24K0072-05 A 01
	Cleanup Batch: CMK0113	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.763	0.655-0.886		0.997	**1.03**	ng/kg	
2,3,7,8-TCDD			0.655-0.886	0.134	0.997	ND	ng/kg	U
1,2,3,7,8-PeCDF			1.318-1.783	0.012	0.997	ND	ng/kg	U
2,3,4,7,8-PeCDF			1.318-1.783	0.137	0.997	ND	ng/kg	U
1,2,3,7,8-PeCDD			1.318-1.783	0.116	0.997	ND	ng/kg	U
1,2,3,4,7,8-HxCDF			1.054-1.426	0.015	0.997	ND	ng/kg	U
1,2,3,6,7,8-HxCDF			1.054-1.426	0.015	0.997	ND	ng/kg	U
2,3,4,6,7,8-HxCDF		0.665	1.054-1.426		0.997	**0.193**	ng/kg	EMPC, J
1,2,3,7,8,9-HxCDF			1.054-1.426	0.019	0.997	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	0.029	0.997	ND	ng/kg	U
1,2,3,6,7,8-HxCDD		1.789	1.054-1.426		0.997	**0.287**	ng/kg	EMPC, J
1,2,3,7,8,9-HxCDD			1.054-1.426	0.032	0.997	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDF		1.040	0.893-1.208		0.997	**1.99**	ng/kg	
1,2,3,4,7,8,9-HpCDF			0.893-1.208	0.002	0.997	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDD		1.041	0.893-1.208		2.49	**4.45**	ng/kg	
OCDF		1.022	0.757-1.024		2.49	**1.43**	ng/kg	J
OCDD		0.846	0.757-1.024		9.97	**24.5**	ng/kg	B
Homologue groups								
Total TCDF					0.997	**4.18**	ng/kg	
Total TCDD					0.997	**5.45**	ng/kg	
Total PeCDF					0.997	**2.28**	ng/kg	
Total PeCDD					0.997	**3.80**	ng/kg	
Total HxCDF					0.997	**0.124**	ng/kg	J
Total HxCDD					0.997	**5.76**	ng/kg	
Total HpCDF					0.997	**1.99**	ng/kg	
Total HpCDD					0.997	**7.86**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-J

24K0072-05 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:50

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 18:11

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					0.37		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					0.22		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					0.35		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					0.18		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-J

24K0072-05 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:50

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 18:11

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.800*	*0.655-0.886*	*24-169 %*	*80.2*	*%*	
13C12-2,3,7,8-TCDD		*0.796*	*0.655-0.886*	*25-164 %*	*88.8*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.544*	*1.318-1.783*	*24-185 %*	*88.4*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.569*	*1.318-1.783*	*21-178 %*	*81.0*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.608*	*1.318-1.783*	*25-181 %*	*79.8*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.536*	*0.434-0.587*	*26-152 %*	*82.9*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.540*	*0.434-0.587*	*26-123 %*	*76.1*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.545*	*0.434-0.587*	*28-136 %*	*80.3*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.530*	*0.434-0.587*	*29-147 %*	*77.9*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.274*	*1.054-1.426*	*32-141 %*	*84.6*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.245*	*1.054-1.426*	*28-130 %*	*77.9*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.466*	*0.374-0.506*	*28-143 %*	*71.5*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.423*	*0.374-0.506*	*26-138 %*	*67.0*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.063*	*0.893-1.208*	*23-140 %*	*78.1*	*%*	
13C12-OCDD		*0.933*	*0.757-1.024*	*17-157 %*	*69.4*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*101*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-J

24K0072-05 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:50

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 18:11

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-J

24K0072-05 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 11/04/2024 12:50

Instrument: N/A Analyst: NL — Analyzed: 11/12/2024 04:58

Sample Preparation: Preparation Method: No Prep-Organics — Extract ID: 24K0072-05

Preparation Batch: BMK0224 — Sample Size: 1 g (wet)

Prepared: 11/11/2024 — Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**92.38**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-K

24K0072-06 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:55
Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 20:45

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24K0072-06 A 01
	Preparation Batch: BMK0254	Sample Size: 10.83 g (wet)	Dry Weight:10.05 g
	Prepared: 11/13/2024	Final Volume: 20 uL	% Solids: 92.77
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24K0072-06 A 01
	Cleanup Batch: CMK0114	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0072-06 A 01
	Cleanup Batch: CMK0112	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24K0072-06 A 01
	Cleanup Batch: CMK0113	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.618	0.655-0.886		0.995	**0.585**	ng/kg	EMPC, J
2,3,7,8-TCDD			0.655-0.886	0.115	0.995	ND	ng/kg	U
1,2,3,7,8-PeCDF			1.318-1.783	0.012	0.995	ND	ng/kg	U
2,3,4,7,8-PeCDF			1.318-1.783	0.131	0.995	ND	ng/kg	U
1,2,3,7,8-PeCDD			1.318-1.783	0.125	0.995	ND	ng/kg	U
1,2,3,4,7,8-HxCDF			1.054-1.426	0.018	0.995	ND	ng/kg	U
1,2,3,6,7,8-HxCDF			1.054-1.426	0.019	0.995	ND	ng/kg	U
2,3,4,6,7,8-HxCDF			1.054-1.426	0.019	0.995	ND	ng/kg	U
1,2,3,7,8,9-HxCDF			1.054-1.426	0.023	0.995	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	0.025	0.995	ND	ng/kg	U
1,2,3,6,7,8-HxCDD		1.387	1.054-1.426		0.995	**0.849**	ng/kg	J
1,2,3,7,8,9-HxCDD		1.023	1.054-1.426		0.995	**0.524**	ng/kg	EMPC, J
1,2,3,4,6,7,8-HpCDF		1.135	0.893-1.208		0.995	**4.18**	ng/kg	
1,2,3,4,7,8,9-HpCDF		1.242	0.893-1.208		0.995	**0.245**	ng/kg	EMPC, J
1,2,3,4,6,7,8-HpCDD		1.003	0.893-1.208		2.49	**21.3**	ng/kg	
OCDF		0.982	0.757-1.024		2.49	**9.57**	ng/kg	
OCDD		0.926	0.757-1.024		9.95	**189**	ng/kg	B
Homologue groups								
Total TCDF					0.995	**4.41**	ng/kg	
Total TCDD					0.995	**12.0**	ng/kg	
Total PeCDF					0.995	**1.22**	ng/kg	
Total PeCDD					0.995	**8.78**	ng/kg	
Total HxCDF					0.995	ND	ng/kg	U
Total HxCDD					0.995	**13.8**	ng/kg	
Total HpCDF					0.995	**16.0**	ng/kg	
Total HpCDD					0.995	**37.1**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-K

24K0072-06 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:55

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 20:45

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):				0.66			
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):				0.51			
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):				0.60			
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):				0.40			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-K

24K0072-06 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:55

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 20:45

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.792*	*0.655-0.886*	*24-169 %*	*79.0*	*%*	
13C12-2,3,7,8-TCDD		*0.806*	*0.655-0.886*	*25-164 %*	*86.8*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.522*	*1.318-1.783*	*24-185 %*	*84.8*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.495*	*1.318-1.783*	*21-178 %*	*75.7*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.597*	*1.318-1.783*	*25-181 %*	*75.8*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.527*	*0.434-0.587*	*26-152 %*	*82.6*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.539*	*0.434-0.587*	*26-123 %*	*76.1*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.538*	*0.434-0.587*	*28-136 %*	*78.8*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.519*	*0.434-0.587*	*29-147 %*	*79.1*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.252*	*1.054-1.426*	*32-141 %*	*81.9*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.316*	*1.054-1.426*	*28-130 %*	*76.4*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.428*	*0.374-0.506*	*28-143 %*	*67.5*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.462*	*0.374-0.506*	*26-138 %*	*55.1*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.073*	*0.893-1.208*	*23-140 %*	*71.6*	*%*	
13C12-OCDD		*0.900*	*0.757-1.024*	*17-157 %*	*64.7*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*101*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-K

24K0072-06 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 12:55

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 20:45

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-K

24K0072-06 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 11/04/2024 12:55

Instrument: N/A Analyst: NL — Analyzed: 11/12/2024 04:58

Sample Preparation: Preparation Method: No Prep-Organics — Extract ID: 24K0072-06

Preparation Batch: BMK0224 — Sample Size: 1 g (wet)

Prepared: 11/11/2024 — Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**92.77**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-L

24K0072-07 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 13:00
Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 21:35

Sample Preparation:	Preparation Method: EPA 1613		Extract ID: 24K0072-07 A 01
	Preparation Batch: BMK0254	Sample Size: 11.36 g (wet)	Dry Weight:10.03 g
	Prepared: 11/13/2024	Final Volume: 20 uL	% Solids: 88.31
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 24K0072-07 A 01
	Cleanup Batch: CMK0114	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		Extract ID:24K0072-07 A 01
	Cleanup Batch: CMK0112	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	
Sample Cleanup:	Cleanup Method: Florisil		Extract ID:24K0072-07 A 01
	Cleanup Batch: CMK0113	Initial Volume: 20 uL	
	Cleaned: 15-Nov-2024	Final Volume: 20 uL	

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes
2,3,7,8-TCDF		0.666	0.655-0.886		0.997	**2.96**	ng/kg	
2,3,7,8-TCDD			0.655-0.886	0.134	0.997	ND	ng/kg	U
1,2,3,7,8-PeCDF		1.329	1.318-1.783		0.997	**0.732**	ng/kg	J
2,3,4,7,8-PeCDF		1.582	1.318-1.783		0.997	**0.646**	ng/kg	J
1,2,3,7,8-PeCDD		2.193	1.318-1.783		0.997	**0.584**	ng/kg	EMPC, J
1,2,3,4,7,8-HxCDF		1.318	1.054-1.426		0.997	**0.343**	ng/kg	J
1,2,3,6,7,8-HxCDF		1.541	1.054-1.426		0.997	**0.353**	ng/kg	EMPC, J
2,3,4,6,7,8-HxCDF		1.064	1.054-1.426		0.997	**0.521**	ng/kg	J
1,2,3,7,8,9-HxCDF			1.054-1.426	0.022	0.997	ND	ng/kg	U
1,2,3,4,7,8-HxCDD			1.054-1.426	0.028	0.997	ND	ng/kg	U
1,2,3,6,7,8-HxCDD		1.211	1.054-1.426		0.997	**0.277**	ng/kg	J
1,2,3,7,8,9-HxCDD		1.410	1.054-1.426		0.997	**0.802**	ng/kg	J
1,2,3,4,6,7,8-HpCDF		1.175	0.893-1.208		0.997	**1.97**	ng/kg	
1,2,3,4,7,8,9-HpCDF			0.893-1.208	0.003	0.997	ND	ng/kg	U
1,2,3,4,6,7,8-HpCDD		0.996	0.893-1.208		2.49	**8.16**	ng/kg	
OCDF		0.947	0.757-1.024		2.49	**1.83**	ng/kg	J
OCDD		0.787	0.757-1.024		9.97	**34.1**	ng/kg	B
Homologue groups								
Total TCDF					0.997	**28.6**	ng/kg	
Total TCDD					0.997	**24.8**	ng/kg	
Total PeCDF					0.997	**13.3**	ng/kg	
Total PeCDD					0.997	**15.5**	ng/kg	
Total HxCDF					0.997	**3.76**	ng/kg	
Total HxCDD					0.997	**28.8**	ng/kg	
Total HpCDF					0.997	**1.97**	ng/kg	
Total HpCDD					0.997	**15.7**	ng/kg	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-L

24K0072-07 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 13:00

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 21:35

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):					1.51		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):					1.44		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC = ND):					1.20		
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, EMPC = ND):					0.82		

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-L

24K0072-07 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 13:00

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 21:35

Analyte	DF/Split	Ion Ratio	Ratio Limits	Reporting Limit	Result	Units	Notes
Labeled compounds							
13C12-2,3,7,8-TCDF		*0.788*	*0.655-0.886*	*24-169 %*	*76.5*	*%*	
13C12-2,3,7,8-TCDD		*0.795*	*0.655-0.886*	*25-164 %*	*83.7*	*%*	
13C12-1,2,3,7,8-PeCDF		*1.499*	*1.318-1.783*	*24-185 %*	*78.4*	*%*	
13C12-2,3,4,7,8-PeCDF		*1.489*	*1.318-1.783*	*21-178 %*	*72.9*	*%*	
13C12-1,2,3,7,8-PeCDD		*1.656*	*1.318-1.783*	*25-181 %*	*73.1*	*%*	
13C12-1,2,3,4,7,8-HxCDF		*0.535*	*0.434-0.587*	*26-152 %*	*79.2*	*%*	
13C12-1,2,3,6,7,8-HxCDF		*0.514*	*0.434-0.587*	*26-123 %*	*73.4*	*%*	
13C12-2,3,4,6,7,8-HxCDF		*0.508*	*0.434-0.587*	*28-136 %*	*75.7*	*%*	
13C12-1,2,3,7,8,9-HxCDF		*0.508*	*0.434-0.587*	*29-147 %*	*81.5*	*%*	
13C12-1,2,3,4,7,8-HxCDD		*1.245*	*1.054-1.426*	*32-141 %*	*79.5*	*%*	
13C12-1,2,3,6,7,8-HxCDD		*1.243*	*1.054-1.426*	*28-130 %*	*73.3*	*%*	
13C12-1,2,3,4,6,7,8-HpCDF		*0.442*	*0.374-0.506*	*28-143 %*	*65.7*	*%*	
13C12-1,2,3,4,7,8,9-HpCDF		*0.438*	*0.374-0.506*	*26-138 %*	*58.2*	*%*	
13C12-1,2,3,4,6,7,8-HpCDD		*1.109*	*0.893-1.208*	*23-140 %*	*71.1*	*%*	
13C12-OCDD		*0.847*	*0.757-1.024*	*17-157 %*	*63.5*	*%*	
37Cl4-2,3,7,8-TCDD				*35-197 %*	*93.8*	*%*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

SP-1-L

24K0072-07 (Solid)

Dioxins/Furans

Method: EPA 1613B — Sampled: 11/04/2024 13:00

Instrument: AUTOSPEC01 Analyst: jgr — Analyzed: 12/19/2024 21:35

Analyte	DF/Split	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	Notes

SP-1-L

24K0072-07 (Solid)

Extractions

Method: ASTM D2216 — Sampled: 11/04/2024 13:00

Instrument: N/A Analyst: NL — Analyzed: 11/12/2024 04:58

Sample Preparation: Preparation Method: No Prep-Organics — Extract ID: 24K0072-07

Preparation Batch: BMK0224 — Sample Size: 1 g (wet)

Prepared: 11/11/2024 — Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids			0.01	**88.31**	%	

Labeled compounds

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

Analysis by: Analytical Resources, LLC

Dioxins/Furans - Quality Control

Batch BMK0254 - EPA 1613B

Instrument: AUTOSPEC01 Analyst: jg

QC Sample/Analyte	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0254-BLK1)				Prepared: 13-Nov-2024 Analyzed: 17-Dec-2024 23:19							
2,3,7,8-TCDF		0.655-0.886	0.117	1.00	ND	ng/kg					U
2,3,7,8-TCDD		0.655-0.886	0.113	1.00	ND	ng/kg					U
1,2,3,7,8-PeCDF		1.318-1.783	0.146	1.00	ND	ng/kg					U
2,3,4,7,8-PeCDF		1.318-1.783	0.158	1.00	ND	ng/kg					U
1,2,3,7,8-PeCDD		1.318-1.783	0.120	1.00	ND	ng/kg					U
1,2,3,4,7,8-HxCDF		1.054-1.426	0.086	1.00	ND	ng/kg					U
1,2,3,6,7,8-HxCDF		1.054-1.426	0.089	1.00	ND	ng/kg					U
2,3,4,6,7,8-HxCDF		1.054-1.426	0.083	1.00	ND	ng/kg					U
1,2,3,7,8,9-HxCDF		1.054-1.426	0.105	1.00	ND	ng/kg					U
1,2,3,4,7,8-HxCDD		1.054-1.426	0.135	1.00	ND	ng/kg					U
1,2,3,6,7,8-HxCDD		1.054-1.426	0.146	1.00	ND	ng/kg					U
1,2,3,7,8,9-HxCDD		1.054-1.426	0.153	1.00	ND	ng/kg					U
1,2,3,4,6,7,8-HpCDF		0.893-1.208	0.077	1.00	ND	ng/kg					U
1,2,3,4,7,8,9-HpCDF		0.893-1.208	0.110	1.00	ND	ng/kg					U
1,2,3,4,6,7,8-HpCDD		0.893-1.208	0.152	2.50	ND	ng/kg					U
OCDF		0.757-1.024	0.153	2.50	ND	ng/kg					U
OCDD	0.758	0.757-1.024		10.0	0.779	ng/kg					J
Homologue group											
Total TCDF				1.00	ND	ng/kg					U
Total TCDD				1.00	0.0853	ng/kg					J
Total PeCDF				1.00	ND	ng/kg					U
Total PeCDD				1.00	0.211	ng/kg					J
Total HxCDF				1.00	ND	ng/kg					U
Total HxCDD				1.00	ND	ng/kg					U
Total HpCDF				1.00	ND	ng/kg					U
Total HpCDD				1.00	ND	ng/kg					U

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC):	0.10
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC):	0.00
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, EMPC=ND):	0.10
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0 EDL, EMPC=ND):	0.00

Labeled compounds				
13C12-2,3,7,8-TCDF	*0.800*	*0.655-0.886*	*80.6*	*24-169 %*
13C12-2,3,7,8-TCDD	*0.794*	*0.655-0.886*	*90.6*	*25-164 %*
13C12-1,2,3,7,8-PeCDF	*1.476*	*1.318-1.783*	*96.3*	*24-185 %*
13C12-2,3,4,7,8-PeCDF	*1.523*	*1.318-1.783*	*89.8*	*21-178 %*

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

Analysis by: Analytical Resources, LLC

Dioxins/Furans - Quality Control

Batch BMK0254 - EPA 1613B

Instrument: AUTOSPEC01 Analyst: jg

QC Sample/Analyte	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BMK0254-BLK1)				Prepared: 13-Nov-2024	Analyzed: 17-Dec-2024 23:19						
13C12-1,2,3,7,8-PeCDD	*1.588*	*1.318-1.783*					*92.7*			*25-181 %*	
13C12-1,2,3,4,7,8-HxCDF	*0.542*	*0.434-0.587*					*77.5*			*26-152 %*	
13C12-1,2,3,6,7,8-HxCDF	*0.542*	*0.434-0.587*					*70.1*			*26-123 %*	
13C12-2,3,4,6,7,8-HxCDF	*0.544*	*0.434-0.587*					*78.5*			*28-136 %*	
13C12-1,2,3,7,8,9-HxCDF	*0.539*	*0.434-0.587*					*81.5*			*29-147 %*	
13C12-1,2,3,4,7,8-HxCDD	*1.229*	*1.054-1.426*					*87.2*			*32-141 %*	
13C12-1,2,3,6,7,8-HxCDD	*1.144*	*1.054-1.426*					*75.4*			*28-130 %*	
13C12-1,2,3,4,6,7,8-HpCDF	*0.417*	*0.374-0.506*					*82.3*			*28-143 %*	
13C12-1,2,3,4,7,8,9-HpCDF	*0.428*	*0.374-0.506*					*83.1*			*26-138 %*	
13C12-1,2,3,4,6,7,8-HpCDD	*1.078*	*0.893-1.208*					*97.4*			*23-140 %*	
13C12-OCDD	*0.895*	*0.757-1.024*					*103*			*17-157 %*	*E*
37Cl4-2,3,7,8-TCDD							*102*			*35-197 %*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

Analysis by: Analytical Resources, LLC

Dioxins/Furans - Quality Control

Batch BMK0254 - EPA 1613B

Instrument: AUTOSPEC01 Analyst: jg

QC Sample/Analyte	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BMK0254-BS1)				Prepared: 13-Nov-2024	Analyzed: 18-Dec-2024 00:08						
2,3,7,8-TCDF	0.754	0.655-0.886		1.00	20.9	ng/kg	104	75-158 %			
2,3,7,8-TCDD	0.789	0.655-0.886		1.00	19.6	ng/kg	97.8	67-158 %			
1,2,3,7,8-PeCDF	1.525	1.318-1.783		1.00	98.5	ng/kg	98.5	80-134 %			
2,3,4,7,8-PeCDF	1.509	1.318-1.783		1.00	106	ng/kg	106	68-160 %			
1,2,3,7,8-PeCDD	1.619	1.318-1.783		1.00	112	ng/kg	112	70-142 %			
1,2,3,4,7,8-HxCDF	1.252	1.054-1.426		1.00	103	ng/kg	103	72-134 %			
1,2,3,6,7,8-HxCDF	1.276	1.054-1.426		1.00	121	ng/kg	121	84-130 %			
2,3,4,6,7,8-HxCDF	1.213	1.054-1.426		1.00	96.3	ng/kg	96.3	70-156 %			
1,2,3,7,8,9-HxCDF	1.206	1.054-1.426		1.00	107	ng/kg	107	78-130 %			
1,2,3,4,7,8-HxCDD	1.274	1.054-1.426		1.00	97.4	ng/kg	97.4	70-164 %			
1,2,3,6,7,8-HxCDD	1.374	1.054-1.426		1.00	107	ng/kg	107	76-134 %			
1,2,3,7,8,9-HxCDD	1.183	1.054-1.426		1.00	108	ng/kg	108	64-162 %			
1,2,3,4,6,7,8-HpCDF	1.041	0.893-1.208		1.00	105	ng/kg	105	82-122 %			
1,2,3,4,7,8,9-HpCDF	0.994	0.893-1.208		1.00	110	ng/kg	110	78-138 %			
1,2,3,4,6,7,8-HpCDD	1.112	0.893-1.208		2.50	110	ng/kg	110	70-140 %			
OCDF	0.999	0.757-1.024		2.50	181	ng/kg	90.4	63-170 %			
OCDD	0.850	0.757-1.024		10.0	195	ng/kg	97.3	78-144 %			B
Labeled compounds											
13C12-2,3,7,8-TCDF	*0.815*	*0.655-0.886*			*75.2*			*24-169 %*			
13C12-2,3,7,8-TCDD	*0.806*	*0.655-0.886*			*86.2*			*25-164 %*			
13C12-1,2,3,7,8-PeCDF	*1.474*	*1.318-1.783*			*94.4*			*24-185 %*			
13C12-2,3,4,7,8-PeCDF	*1.504*	*1.318-1.783*			*88.5*			*21-178 %*			
13C12-1,2,3,7,8-PeCDD	*1.580*	*1.318-1.783*			*86.0*			*25-181 %*			
13C12-1,2,3,4,7,8-HxCDF	*0.516*	*0.434-0.587*			*75.2*			*26-152 %*			
13C12-1,2,3,6,7,8-HxCDF	*0.539*	*0.434-0.587*			*68.1*			*26-123 %*			
13C12-2,3,4,6,7,8-HxCDF	*0.530*	*0.434-0.587*			*75.0*			*28-136 %*			
13C12-1,2,3,7,8,9-HxCDF	*0.523*	*0.434-0.587*			*77.7*			*29-147 %*			
13C12-1,2,3,4,7,8-HxCDD	*1.259*	*1.054-1.426*			*82.7*			*32-141 %*			
13C12-1,2,3,6,7,8-HxCDD	*1.252*	*1.054-1.426*			*73.2*			*28-130 %*			
13C12-1,2,3,4,6,7,8-HpCDF	*0.458*	*0.374-0.506*			*75.0*			*28-143 %*			
13C12-1,2,3,4,7,8,9-HpCDF	*0.449*	*0.374-0.506*			*78.9*			*26-138 %*			
13C12-1,2,3,4,6,7,8-HpCDD	*1.054*	*0.893-1.208*			*86.3*			*23-140 %*			
13C12-OCDD	*0.894*	*0.757-1.024*			*97.7*			*17-157 %*			
37Cl4-2,3,7,8-TCDD					*108*			*35-197 %*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

Analysis by: Analytical Resources, LLC

Dioxins/Furans - Quality Control

Batch BMK0254 - EPA 1613B

Instrument: AUTOSPEC01 Analyst: jg

QC Sample/Analyte	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	%REC	%REC Limits	RPD	RPD Limit	Notes
Duplicate (BMK0254-DUP2)		**Source: 24K0072-01**		Prepared: 13-Nov-2024	Analyzed: 18-Dec-2024 00:58						
2,3,7,8-TCDF	0.766	0.655-0.886		0.997	13.7	ng/kg			13.10	25	
2,3,7,8-TCDD	0.462	0.655-0.886		0.997	0.260	ng/kg					EMPC, J
1,2,3,7,8-PeCDF	1.473	1.318-1.783		0.997	0.598	ng/kg			7.80	25	J
2,3,4,7,8-PeCDF	1.475	1.318-1.783		0.997	0.507	ng/kg			2.14	25	J
1,2,3,7,8-PeCDD		1.318-1.783	0.416	0.997	ND	ng/kg					U
1,2,3,4,7,8-HxCDF	0.840	1.054-1.426		0.997	0.275	ng/kg			14.60	25	EMPC, J
1,2,3,6,7,8-HxCDF	0.851	1.054-1.426		0.997	0.386	ng/kg			62.50	25	*, EMPC, J
2,3,4,6,7,8-HxCDF	1.211	1.054-1.426		0.997	0.346	ng/kg			56.50	25	*, J
1,2,3,7,8,9-HxCDF		1.054-1.426	0.213	0.997	ND	ng/kg					U
1,2,3,4,7,8-HxCDD		1.054-1.426	0.200	0.997	ND	ng/kg					U
1,2,3,6,7,8-HxCDD	0.553	1.054-1.426		0.997	0.503	ng/kg			10.30	25	EMPC, J
1,2,3,7,8,9-HxCDD	2.101	1.054-1.426		0.997	0.431	ng/kg			18.40	25	EMPC, J
1,2,3,4,6,7,8-HpCDF	1.019	0.893-1.208		0.997	1.40	ng/kg			4.40	25	
1,2,3,4,7,8,9-HpCDF	1.520	0.893-1.208		0.997	0.121	ng/kg					EMPC, J
1,2,3,4,6,7,8-HpCDD	0.956	0.893-1.208		2.49	5.80	ng/kg			19.50	25	
OCDF	0.794	0.757-1.024		2.49	0.579	ng/kg			58.20	25	*, J
OCDD	0.840	0.757-1.024		9.97	34.8	ng/kg			30.70	25	*, B
Homologue group											
Total TCDF				0.997	23.4	ng/kg			7.30	200	
Total TCDD				0.997	13.1	ng/kg			16.20	200	
Total PeCDF				0.997	3.96	ng/kg			74.40	200	
Total PeCDD				0.997	6.25	ng/kg			11.70	200	
Total HxCDF				0.997	2.82	ng/kg			76.20	200	
Total HxCDD				0.997	7.21	ng/kg			17.80	200	
Total HpCDF				0.997	2.88	ng/kg			0.92	200	
Total HpCDD				0.997	11.7	ng/kg			14.20	200	
Labeled compounds											
13C12-2,3,7,8-TCDF	*0.808*	*0.655-0.886*			*65.0*			*24-169 %*			
13C12-2,3,7,8-TCDD	*0.804*	*0.655-0.886*			*82.0*			*25-164 %*			
13C12-1,2,3,7,8-PeCDF	*1.485*	*1.318-1.783*			*90.0*			*24-185 %*			
13C12-2,3,4,7,8-PeCDF	*1.491*	*1.318-1.783*			*86.4*			*21-178 %*			
13C12-1,2,3,7,8-PeCDD	*1.651*	*1.318-1.783*			*83.1*			*25-181 %*			
13C12-1,2,3,4,7,8-HxCDF	*0.536*	*0.434-0.587*			*65.9*			*26-152 %*			
13C12-1,2,3,6,7,8-HxCDF	*0.530*	*0.434-0.587*			*57.4*			*26-123 %*			
13C12-2,3,4,6,7,8-HxCDF	*0.515*	*0.434-0.587*			*68.8*			*28-136 %*			
13C12-1,2,3,7,8,9-HxCDF	*0.516*	*0.434-0.587*			*51.5*			*29-147 %*			

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

Analysis by: Analytical Resources, LLC

Dioxins/Furans - Quality Control

Batch BMK0254 - EPA 1613B

Instrument: AUTOSPEC01 Analyst: jg

QC Sample/Analyte	Ion Ratio	Ratio Limits	EDL	Reporting Limit	Result	Units	%REC	%REC Limits	RPD	RPD Limit	Notes
Duplicate (BMK0254-DUP2)		**Source: 24K0072-01**		Prepared: 13-Nov-2024	Analyzed: 18-Dec-2024 00:58						
13C12-1,2,3,4,7,8-HxCDD	*1.259*	*1.054-1.426*					*71.9*			*32-141 %*	
13C12-1,2,3,6,7,8-HxCDD	*1.173*	*1.054-1.426*					*64.7*			*28-130 %*	
13C12-1,2,3,4,6,7,8-HpCDF	*0.424*	*0.374-0.506*					*70.3*			*28-143 %*	
13C12-1,2,3,4,7,8,9-HpCDF	*0.426*	*0.374-0.506*					*72.5*			*26-138 %*	
13C12-1,2,3,4,6,7,8-HpCDD	*1.128*	*0.893-1.208*					*78.6*			*23-140 %*	
13C12-OCDD	*0.880*	*0.757-1.024*					*72.2*			*17-157 %*	
37Cl4-2,3,7,8-TCDD							*114*			*35-197 %*	

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

Certified Analyses included in this Report

Analyte	Certifications
EPA 1613B in Solid	
2,3,7,8-TCDF	DoD-ELAP,NELAP,WADOE
2,3,7,8-TCDD	DoD-ELAP,NELAP,WADOE
1,2,3,7,8-PeCDF	DoD-ELAP,NELAP,WADOE
2,3,4,7,8-PeCDF	DoD-ELAP,NELAP,WADOE
1,2,3,7,8-PeCDD	DoD-ELAP,NELAP,WADOE
1,2,3,4,7,8-HxCDF	DoD-ELAP,NELAP,WADOE
1,2,3,6,7,8-HxCDF	DoD-ELAP,NELAP,WADOE
2,3,4,6,7,8-HxCDF	DoD-ELAP,NELAP,WADOE
1,2,3,7,8,9-HxCDF	DoD-ELAP,NELAP,WADOE
1,2,3,4,7,8-HxCDD	DoD-ELAP,NELAP,WADOE
1,2,3,6,7,8-HxCDD	DoD-ELAP,NELAP,WADOE
1,2,3,7,8,9-HxCDD	DoD-ELAP,NELAP,WADOE
1,2,3,4,6,7,8-HpCDF	DoD-ELAP,NELAP,WADOE
1,2,3,4,7,8,9-HpCDF	DoD-ELAP,NELAP,WADOE
1,2,3,4,6,7,8-HpCDD	DoD-ELAP,NELAP,WADOE
OCDF	DoD-ELAP,NELAP,WADOE
OCDD	DoD-ELAP,NELAP,WADOE
Total TCDF	DoD-ELAP,NELAP,WADOE
Total TCDD	DoD-ELAP,NELAP,WADOE
Total PeCDF	DoD-ELAP,NELAP,WADOE
Total PeCDD	DoD-ELAP,NELAP,WADOE
Total HxCDF	DoD-ELAP,NELAP,WADOE
Total HxCDD	DoD-ELAP,NELAP,WADOE
Total HpCDF	DoD-ELAP,NELAP,WADOE
Total HpCDD	DoD-ELAP,NELAP,WADOE
13C12-2,3,7,8-TCDF	DoD-ELAP
13C12-2,3,7,8-TCDD	DoD-ELAP
13C12-1,2,3,7,8-PeCDF	DoD-ELAP
13C12-2,3,4,7,8-PeCDF	DoD-ELAP
13C12-1,2,3,7,8-PeCDD	DoD-ELAP

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

13C12-1,2,3,4,7,8-HxCDF	DoD-ELAP
13C12-1,2,3,6,7,8-HxCDF	DoD-ELAP
13C12-2,3,4,6,7,8-HxCDF	DoD-ELAP
13C12-1,2,3,7,8,9-HxCDF	DoD-ELAP
13C12-1,2,3,4,7,8-HxCDD	DoD-ELAP
13C12-1,2,3,6,7,8-HxCDD	DoD-ELAP
13C12-1,2,3,4,6,7,8-HpCDF	DoD-ELAP
13C12-1,2,3,4,7,8,9-HpCDF	DoD-ELAP
13C12-1,2,3,4,6,7,8-HpCDD	DoD-ELAP
13C12-OCDD	DoD-ELAP
37Cl4-2,3,7,8-TCDD	DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2025
WADOE	WA Dept of Ecology	C558	06/30/2025
WA-DW	Ecology - Drinking Water	C558	06/30/2025

GeoEngineers	Project: POE Marine Terminal SW Improvements	
17425 Union Hill Road Suite 250	Project Number: 0676-020-07	**Reported:**
Redmond WA, 98052	Project Manager: Abhijit R. Joshi	26-Dec-2024 08:07

Notes and Definitions

*	Flagged value is not within established control limits.
B	This analyte was detected in the method blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
EMPC	Estimated Maximum Possible Concentration qualifier for HRGCMS Dioxin
J	Estimated concentration value detected below the reporting limit.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
X	Indicates possible CDPE interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Appendix D
Landfill Disposal Weight Tickets

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927742**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/7/24 6:27 am 10/7/24 6:50 am

7749 GCEU432220

Contract:TB14634B

BNSF230017

Scale In	GROSS WEIGHT	115,960	NET TONS	30.89		INBOUND
Scale Out	TARE WEIGHT	54,180	NET WEIGHT	61,780		INVOICE

28.00 YD Tracking QTY
30.89 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927852**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 7:42 am 10/8/24 8:01 am

3516 RBSU200296

Contract:TB14634B

DTTX27280

Scale In	GROSS WEIGHT	97,980	NET TONS	25.10		INBOUND
Scale Out	TARE WEIGHT	47,780	NET WEIGHT	50,200		INVOICE

28.00 YD Tracking QTY
25.10 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927857**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 7:46 am 10/8/24 8:07 am

2234 GCEU435366

Contract:TB14634B

DTTX27280

Scale In	GROSS WEIGHT	105,880	NET TONS	29.05		INBOUND
Scale Out	TARE WEIGHT	47,780	NET WEIGHT	58,100		INVOICE

28.00	YD	Tracking QTY	
29.05	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927869**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 7:58 am 10/8/24 8:26 am

3517 TOLU476859

Contract:TB14634B

DTTX27280

Scale In	GROSS WEIGHT	101,240	NET TONS	27.67		INBOUND
Scale Out	TARE WEIGHT	45,900	NET WEIGHT	55,340		INVOICE

28.00	YD	Tracking QTY	
27.67	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927882**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 8:34 am 10/8/24 8:56 am

7749 RBSU200374

Contract:TB14634B

DTTX27574

Scale In	GROSS WEIGHT	99,320	NET TONS	25.69		INBOUND
Scale Out	TARE WEIGHT	47,940	NET WEIGHT	51,380		INVOICE

28.00	YD	Tracking QTY	
25.69	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927921**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 9:32 am 10/8/24 9:58 am

7749 RBSU200427

Contract:TB14634B

DTTX27574

Scale In	GROSS WEIGHT	100,500	NET TONS	25.85		INBOUND
Scale Out	TARE WEIGHT	48,800	NET WEIGHT	51,700		INVOICE

28.00	YD	Tracking QTY	
25.85	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927922**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 9:37 am 10/8/24 9:59 am

2234 RBSU200253

Contract:TB14634B

BNSF231025

Scale In	GROSS WEIGHT	106,680	NET TONS	27.14		INBOUND
Scale Out	TARE WEIGHT	52,400	NET WEIGHT	54,280		INVOICE

28.00	YD	Tracking QTY	
27.14	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927964**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 11:43 am 10/8/24 12:03 pm

7749 GCEU430252

Contract:TB14634B

BNSF231025

Scale In	GROSS WEIGHT	103,880	NET TONS	28.21		INBOUND
Scale Out	TARE WEIGHT	47,460	NET WEIGHT	56,420		INVOICE

28.00	YD	Tracking QTY	
28.21	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927969**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 12:21 pm 10/8/24 12:44 pm

2234 GCEU435545

Contract:TB14634B

DTTX27280

Scale In	GROSS WEIGHT	105,880	NET TONS	29.06	INBOUND
Scale Out	TARE WEIGHT	47,760	NET WEIGHT	58,120	INVOICE

28.00	YD	Tracking QTY	
29.06	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927977**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 1:23 pm 10/8/24 1:51 pm

5225 GCEU426548

Contract:TB14634B

BNSF231018

Scale In	GROSS WEIGHT	100,660	NET TONS	30.27	INBOUND
Scale Out	TARE WEIGHT	40,120	NET WEIGHT	60,540	INVOICE

28.00	YD	Tracking QTY	
30.27	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4927976**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

10/8/24 1:25 pm 10/8/24 1:42 pm

7749 GCEU426382

Contract:TB14634B

BNSF231018

Scale In	GROSS WEIGHT	104,940	NET TONS	28.42		INBOUND
Scale Out	TARE WEIGHT	48,100	NET WEIGHT	56,840		INVOICE

28.00	YD	Tracking QTY	
28.42	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:

CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4930839**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/19/24 6:18 am 11/19/24 6:45 am

5226 RBSU200303

Contract:TB14634B

DTTX458902

Scale In	GROSS WEIGHT	108,200	NET TONS	29.99		INBOUND
Scale Out	TARE WEIGHT	48,220	NET WEIGHT	59,980		INVOICE

28.00	YD	Tracking QTY	
29.99	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4930972**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/19/24 1:58 pm 11/19/24 2:29 pm

2234 TOLU424299

Contract:TB14634B

DTTX27574

Scale In	GROSS WEIGHT	111,520	NET TONS	31.30		INBOUND
Scale Out	TARE WEIGHT	48,920	NET WEIGHT	62,600		INVOICE

28.00	YD	Tracking QTY	
31.30	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4930993**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/19/24 2:18 pm 11/19/24 3:08 pm

3517 GCEU435506

Contract:TB14634B

DTTX27574

Scale In	GROSS WEIGHT	103,760	NET TONS	26.92		INBOUND
Scale Out	TARE WEIGHT	49,920	NET WEIGHT	53,840		INVOICE

28.00	YD	Tracking QTY	
26.92	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931263**

Denise B.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/23/24 8:02 am 11/23/24 8:27 am

0329 TOLU442171

Contract:TB14634B

DTTX432113

Scale In	GROSS WEIGHT	107,040	NET TONS	29.33		INBOUND
Scale Out	TARE WEIGHT	48,380	NET WEIGHT	58,660		INVOICE

28.00	YD	Tracking QTY	
29.33	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931496**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/27/24 6:33 am 11/27/24 6:59 am

5226 GCEU430272

Contract:TB14634B

BNSF231063

Scale In	GROSS WEIGHT	106,740	NET TONS	29.12		INBOUND
Scale Out	TARE WEIGHT	48,500	NET WEIGHT	58,240		INVOICE

28.00 YD Tracking QTY
29.12 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931495**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/27/24 6:34 am 11/27/24 6:58 am

5227 TOLU468757

Contract:TB14634B

BNSF230137

Scale In	GROSS WEIGHT	103,820	NET TONS	27.57		INBOUND
Scale Out	TARE WEIGHT	48,680	NET WEIGHT	55,140		INVOICE

28.00 YD Tracking QTY
27.57 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931522**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/27/24 8:55 am 11/27/24 9:25 am

5227 RBSU200421

Contract:TB14634B

BNSF231063

Scale In	GROSS WEIGHT	98,040	NET TONS	24.68		INBOUND
Scale Out	TARE WEIGHT	48,680	NET WEIGHT	49,360		INVOICE

28.00 YD Tracking QTY
24.68 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931530**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/27/24 10:02 am 11/27/24 10:27 am

5227 GCEU425103

Contract:TB14634B

BNSF231063

Scale In	GROSS WEIGHT	108,860	NET TONS	30.34		INBOUND
Scale Out	TARE WEIGHT	48,180	NET WEIGHT	60,680		INVOICE

28.00 YD Tracking QTY
30.34 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931582**

Denise B.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/29/24 11:26 am 11/29/24 11:49 am

3517 GCEU425312

Contract:TB14634B

BNSF231050

Scale In	GROSS WEIGHT	104,640	NET TONS	27.91		INBOUND
Scale Out	TARE WEIGHT	48,820	NET WEIGHT	55,820		INVOICE

28.00	YD	Tracking QTY	
27.91	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931597**

Denise B.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/29/24 12:00 pm 11/29/24 12:24 pm

0329 TRLU900884

Contract:TB14634B

BNSF231050

Scale In	GROSS WEIGHT	99,000	NET TONS	25.31		INBOUND
Scale Out	TARE WEIGHT	48,380	NET WEIGHT	50,620		INVOICE

28.00	YD	Tracking QTY	
25.31	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931614**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/30/24 12:20 pm 11/30/24 12:40 pm

2234 GCEU431837

Contract:TB14634B

DTTX427622

Scale In	GROSS WEIGHT	101,280	NET TONS	25.46	INBOUND
Scale Out	TARE WEIGHT	50,360	NET WEIGHT	50,920	INVOICE

28.00 YD Tracking QTY
25.46 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931629**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

11/30/24 1:18 pm 11/30/24 1:56 pm

2234 TOLU456914

Contract:TB14634B

DTTX427622

Scale In	GROSS WEIGHT	102,280	NET TONS	25.89	INBOUND
Scale Out	TARE WEIGHT	50,500	NET WEIGHT	51,780	INVOICE

28.00 YD Tracking QTY
25.89 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932553**

Nixie S.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/11/24 11:45 am 12/11/24 12:07 pm

7329 GCEU426562

Contract:TB14634B

BNSF231053

Scale In	GROSS WEIGHT	103,800	NET TONS	26.51		INBOUND
Scale Out	TARE WEIGHT	50,780	NET WEIGHT	53,020		INVOICE

28.00	YD	Tracking QTY	
26.51	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932554**

Nixie S.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/11/24 11:46 am 12/11/24 12:16 pm

3517 RBSU200146

Contract:TB14634B

BNSF231053

Scale In	GROSS WEIGHT	100,140	NET TONS	25.87		INBOUND
Scale Out	TARE WEIGHT	48,400	NET WEIGHT	51,740		INVOICE

28.00	YD	Tracking QTY	
25.87	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932555**

Nixie S.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/11/24 11:59 am 12/11/24 12:28 pm

2235 RBSU200205

Contract:TB14634B

BNSF231053

Scale In	GROSS WEIGHT	104,540	NET TONS	27.41		INBOUND
Scale Out	TARE WEIGHT	49,720	NET WEIGHT	54,820		INVOICE

28.00 YD Tracking QTY
27.41 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932556**

Nixie S.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/11/24 12:14 pm 12/11/24 12:40 pm

1565 RBSU200389

Contract:TB14634B

BNSF231053

Scale In	GROSS WEIGHT	82,080	NET TONS	15.84		INBOUND
Scale Out	TARE WEIGHT	50,400	NET WEIGHT	31,680		INVOICE

28.00 YD Tracking QTY
15.84 tn Cont Soil Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932558**

Nixie S.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/11/24 12:21 pm 12/11/24 12:43 pm

3516 RBSU200204

Contract:TB14634B

BNSF230010

Scale In	GROSS WEIGHT	101,940	NET TONS	25.68		INBOUND
Scale Out	TARE WEIGHT	50,580	NET WEIGHT	51,360		INVOICE

28.00	YD	Tracking QTY	
25.68	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932561**

Nixie S.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/11/24 12:30 pm 12/11/24 12:56 pm

0329 GCEU445126

Contract:TB14634B

BNSF230010

Scale In	GROSS WEIGHT	106,100	NET TONS	27.57		INBOUND
Scale Out	TARE WEIGHT	50,960	NET WEIGHT	55,140		INVOICE

28.00	YD	Tracking QTY	
27.57	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932562**

Nixie S.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/11/24 12:31 pm 12/11/24 1:03 pm

0331 TOLU468615

Contract:TB14634B

BNSF230010

Scale In	GROSS WEIGHT	100,700	NET TONS	26.16		INBOUND
Scale Out	TARE WEIGHT	48,380	NET WEIGHT	52,320		INVOICE

28.00	YD	Tracking QTY	
26.16	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932563**

Nixie S.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/11/24 12:41 pm 12/11/24 1:10 pm

7329 TRLU901605

Contract:TB14634B

BNSF230010

Scale In	GROSS WEIGHT	100,760	NET TONS	24.45		INBOUND
Scale Out	TARE WEIGHT	51,860	NET WEIGHT	48,900		INVOICE

28.00	YD	Tracking QTY	
24.45	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931693**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/2/24 6:45 am 12/2/24 7:10 am

3517 TOLU452043

Contract:TB14634B

DTTX427026

Scale In	GROSS WEIGHT	105,500	NET TONS	29.06		INBOUND
Scale Out	TARE WEIGHT	47,380	NET WEIGHT	58,120		INVOICE

28.00	YD	Tracking QTY	
29.06	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931691**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/2/24 6:46 am 12/2/24 7:07 am

7331 GCEU426044

Contract:TB14634B

DTTX427026

Scale In	GROSS WEIGHT	101,480	NET TONS	27.16		INBOUND
Scale Out	TARE WEIGHT	47,160	NET WEIGHT	54,320		INVOICE

28.00	YD	Tracking QTY	
27.16	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931867**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 7:02 am 12/3/24 7:33 am

2235 RBSU200432

Contract:TB14634B

BNSF230043

Scale In	GROSS WEIGHT	105,960	NET TONS	27.35		INBOUND
Scale Out	TARE WEIGHT	51,260	NET WEIGHT	54,700		INVOICE

28.00	YD	Tracking QTY	
27.35	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931868**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 7:22 am 12/3/24 7:48 am

3517 TOLU455191

Contract:TB14634B

BNSF230043

Scale In	GROSS WEIGHT	109,500	NET TONS	29.88		INBOUND
Scale Out	TARE WEIGHT	49,740	NET WEIGHT	59,760		INVOICE

28.00	YD	Tracking QTY	
29.88	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931883**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 8:27 am 12/3/24 8:50 am

3517 TOLU468638

Contract:TB14634B

BNSF231105

Scale In	GROSS WEIGHT	106,420	NET TONS	29.85		INBOUND
Scale Out	TARE WEIGHT	46,720	NET WEIGHT	59,700		INVOICE

28.00	YD	Tracking QTY	
29.85	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931885**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 8:40 am 12/3/24 8:59 am

3516 RBSU200298

Contract:TB14634B

BNSF231105

Scale In	GROSS WEIGHT	102,880	NET TONS	27.39		INBOUND
Scale Out	TARE WEIGHT	48,100	NET WEIGHT	54,780		INVOICE

28.00	YD	Tracking QTY	
27.39	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931899**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 9:17 am 12/3/24 9:36 am

2235 TOLU453880

Contract:TB14634B

BNSF231105

Scale In	GROSS WEIGHT	101,960	NET TONS	27.38		INBOUND
Scale Out	TARE WEIGHT	47,200	NET WEIGHT	54,760		INVOICE

28.00	YD	Tracking QTY	
27.38	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931902**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 9:30 am 12/3/24 9:51 am

3517 TOLU422199

Contract:TB14634B

BNSF231105

Scale In	GROSS WEIGHT	103,440	NET TONS	28.40		INBOUND
Scale Out	TARE WEIGHT	46,640	NET WEIGHT	56,800		INVOICE

28.00	YD	Tracking QTY	
28.40	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931915**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 10:10 am 12/3/24 10:31 am

5227 TOLU459232

Contract:TB14634B

BNSF230137

Scale In	GROSS WEIGHT	105,600	NET TONS	28.67		INBOUND
Scale Out	TARE WEIGHT	48,260	NET WEIGHT	57,340		INVOICE

28.00	YD	Tracking QTY	
28.67	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:

CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931923**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 10:20 am 12/3/24 10:42 am

2235 RBSU200203

Contract:TB14634B

BNSF230137

Scale In	GROSS WEIGHT	110,160	NET TONS	30.18		INBOUND
Scale Out	TARE WEIGHT	49,800	NET WEIGHT	60,360		INVOICE

28.00	YD	Tracking QTY	
30.18	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:

CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931927**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 11:13 am 12/3/24 11:32 am

3516 RBSU200315

Contract:TB14634B

BNSF230137

Scale In	GROSS WEIGHT	101,340	NET TONS	26.43		INBOUND
Scale Out	TARE WEIGHT	48,480	NET WEIGHT	52,860		INVOICE

28.00	YD	Tracking QTY	
26.43	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931928**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 11:16 am 12/3/24 11:37 am

3517 GCEU435186

Contract:TB14634B

BNSF231063

Scale In	GROSS WEIGHT	102,740	NET TONS	27.87		INBOUND
Scale Out	TARE WEIGHT	47,000	NET WEIGHT	55,740		INVOICE

28.00	YD	Tracking QTY	
27.87	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931951**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 12:11 pm 12/3/24 12:30 pm

3517 TOLU458817

Contract:TB14634B

BNSF231063

Scale In	GROSS WEIGHT	99,640	NET TONS	25.99		INBOUND
Scale Out	TARE WEIGHT	47,660	NET WEIGHT	51,980		INVOICE

28.00	YD	Tracking QTY	
25.99	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931956**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 12:15 pm 12/3/24 12:38 pm

5227 TRLU900310

Contract:TB14634B

BNSF231063

Scale In	GROSS WEIGHT	110,040	NET TONS	30.50		INBOUND
Scale Out	TARE WEIGHT	49,040	NET WEIGHT	61,000		INVOICE

28.00	YD	Tracking QTY	
30.50	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931968**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/3/24 12:53 pm 12/3/24 1:10 pm

3516 GCEU425421

Contract:TB14634B

BNSF231139

Scale In	GROSS WEIGHT	106,720	NET TONS	29.98		INBOUND
Scale Out	TARE WEIGHT	46,760	NET WEIGHT	59,960		INVOICE

28.00	YD	Tracking QTY	
29.98	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931982**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 7:10 am 12/4/24 7:39 am

5225 RBSU200351

Contract:TB14634B

BNSF231139

Scale In	GROSS WEIGHT	96,300	NET TONS	24.09		INBOUND
Manual Out	TARE WEIGHT	48,120	NET WEIGHT	48,180		INVOICE

28.00	YD	Tracking QTY	
24.09	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4931983**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 7:18 am 12/4/24 7:43 am

2235 GCEU435549

Contract:TB14634B

BNSF231063

Scale In	GROSS WEIGHT	103,680	NET TONS	28.18	INBOUND
Scale Out	TARE WEIGHT	47,320	NET WEIGHT	56,360	INVOICE

28.00	YD	Tracking QTY	
28.18	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932024**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 11:24 am 12/4/24 11:49 am

5226 RBSU200425

Contract:TB14634B

BNSF230102

Scale In	GROSS WEIGHT	103,760	NET TONS	27.76	INBOUND
Scale Out	TARE WEIGHT	48,240	NET WEIGHT	55,520	INVOICE

28.00	YD	Tracking QTY	
27.76	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932045**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 12:18 pm 12/4/24 12:41 pm

2235 TOLU468481

Contract:TB14634B

BNSF230102

Scale In	GROSS WEIGHT	101,600	NET TONS	27.37		INBOUND
Scale Out	TARE WEIGHT	46,860	NET WEIGHT	54,740		INVOICE

28.00	YD	Tracking QTY	
27.37	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932047**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 12:24 pm 12/4/24 12:45 pm

3516 TOLU458196

Contract:TB14634B

DTTX428055

Scale In	GROSS WEIGHT	101,280	NET TONS	26.75		INBOUND
Scale Out	TARE WEIGHT	47,780	NET WEIGHT	53,500		INVOICE

28.00	YD	Tracking QTY	
26.75	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932050**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 1:22 pm 12/4/24 1:41 pm

3516 GCEU432018

Contract:TB14634B

DTTX428055

Scale In	GROSS WEIGHT	103,760	NET TONS	28.50	INBOUND
Scale Out	TARE WEIGHT	46,760	NET WEIGHT	57,000	INVOICE

28.00	YD	Tracking QTY	
28.50	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932077**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 2:17 pm 12/4/24 2:42 pm

2235 RBSU200323

Contract:TB14634B

BNSF231025

Scale In	GROSS WEIGHT	102,560	NET TONS	27.42	INBOUND
Scale Out	TARE WEIGHT	47,720	NET WEIGHT	54,840	INVOICE

28.00	YD	Tracking QTY	
27.42	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932096**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 2:49 pm 12/4/24 3:24 pm

2234 GCEU425399

Contract:TB14634B

BNSF231025

Scale In	GROSS WEIGHT	103,240	NET TONS	27.73		INBOUND
Scale Out	TARE WEIGHT	47,780	NET WEIGHT	55,460		INVOICE

28.00	YD	Tracking QTY	
27.73	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932101**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 3:13 pm 12/4/24 3:41 pm

3516 RBSU200306

Contract:TB14634B

BNSF231025

Scale In	GROSS WEIGHT	97,520	NET TONS	24.79		INBOUND
Scale Out	TARE WEIGHT	47,940	NET WEIGHT	49,580		INVOICE

28.00	YD	Tracking QTY	
24.79	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932102**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 3:22 pm 12/4/24 3:52 pm

5227 GCEU432220

Contract:TB14634B

BNSF230043

Scale In	GROSS WEIGHT	109,400	NET TONS	27.28		INBOUND
Scale Out	TARE WEIGHT	54,840	NET WEIGHT	54,560		INVOICE

28.00	YD	Tracking QTY	
27.28	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932103**

Danielle C.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/4/24 3:27 pm 12/4/24 3:55 pm

2235 GCEU431482

Contract:TB14634B

BNSF230043

Scale In	GROSS WEIGHT	103,540	NET TONS	27.14		INBOUND
Scale Out	TARE WEIGHT	49,260	NET WEIGHT	54,280		INVOICE

28.00	YD	Tracking QTY	
27.14	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932127**

Denise B.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/5/24 2:04 pm 12/5/24 2:31 pm

1565 RBSU200151

Contract:TB14634B

BNSF231025

Scale In	GROSS WEIGHT	104,160	NET TONS	26.27		INBOUND
Scale Out	TARE WEIGHT	51,620	NET WEIGHT	52,540		INVOICE

28.00	YD	Tracking QTY	
26.27	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932147**

Denise B.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/5/24 3:08 pm 12/5/24 3:38 pm

2235 RBSU200441

Contract:TB14634B

BNSF231025

Scale In	GROSS WEIGHT	102,920	NET TONS	27.36		INBOUND
Scale Out	TARE WEIGHT	48,200	NET WEIGHT	54,720		INVOICE

28.00	YD	Tracking QTY	
27.36	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932145**

Denise B.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/5/24 3:09 pm 12/5/24 3:31 pm

1565 GCEU430394

Contract:TB14634B

BNSF230137

Scale In	GROSS WEIGHT	102,400	NET TONS	27.91		INBOUND
Scale Out	TARE WEIGHT	46,580	NET WEIGHT	55,820		INVOICE

28.00	YD	Tracking QTY	
27.91	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Everett Incl. Snohomish County --
WA ROOSEVELT , WA

2A **4932148**

Denise B.

690612 - Bayshore Concrete LLC
16821 Smokey Pt Blvd #808
Arlington,, WA 98223

12/5/24 3:15 pm 12/5/24 3:42 pm

0329 TRLU901512

Contract:TB14634B

BNSF230137

Scale In	GROSS WEIGHT	108,280	NET TONS	30.49		INBOUND
Scale Out	TARE WEIGHT	47,300	NET WEIGHT	60,980		INVOICE

28.00	YD	Tracking QTY	
30.49	tn	Cont Soil	Origin:Everett 100%

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR B337755370 E-seal #2002
OUTBOUND - SCALE INDICATOR 56656605KM E-seal #2008

CHANGE:
CHECK :

Appendix E

Wastewater Discharge Authorization and Laboratory Report

Permit #DAC2408-002

Attachment Inspections

Permit Info | Site Info | Contacts (6) | Fees $0.00 | Inspections(0) | Reviews(1)

Type:	DISCHARGE AUTHORIZATION
Subtype:	
Description of Permit:	Marine Terminal Stormwater Improvements
Status:	ONLINE PYMT RCVD
Applied Date:	8/15/2024
Approved Date:	
Issued Date:	
Finaled Date:	
Expiration Date:	
Description Notes:	8/15/2024 11:53:06 AM Discharge construction stormwater

Attachments:

G1.04 EXISITNG DRAINAGE BASINS MAP - Marine Terminal Stormwater Improvements Mill A Interim Action No. 2.pdf

Permit #DAC2408-002

Attachment Inspections

Permit Info | Site Info | Contacts (6) | Fees $0.00 | Inspections(0) | Reviews(1)

Address:	**3500 TERMINAL AVE**
City/State/Zip:	EVERETT, WA, 98201
Property Type	PARCEL
APN:	29053000203400
Subdivision:	
Tract:	
Block:	
Lot:	
Sect-Twp-Rng:	29 4 25
Lot Size (SF):	1661077.90047

Permit #DAC2408-002

Attachment Inspections

Permit Info | Site Info | Contacts (6) | Fees $0.00 | Inspections(0) | Reviews(1)

Contact Type	Name	Address	City/State/Zip
BILL TO	BAYSHORE CONSTRUCTI...	16821 SMOKEY POINT BL...	ARLINGTON, WA 98223
COMPANY NAME	BAYSHORE CONSTRUCTI...	16821 SMOKEY POINT BL...	ARLINGTON, WA 98223
REQUESTER NAME	JULIE EAGAN	16821 SMOKEY POINT BL...	ARLINGTON, WA 98223
APPLICANT	BAYSHORE CONSTRUCTI...	16821 SMOKEY POINT BL...	ARLINGTON, WA 98223
CONTRACTOR	BAYSHORE CONSTRUCTI...	16821 SMOKEY POINT BL...	ARLINGTON, WA 98223
OWNER	EVERETT PORT OF	PO BOX 538	EVERETT, WA 98206

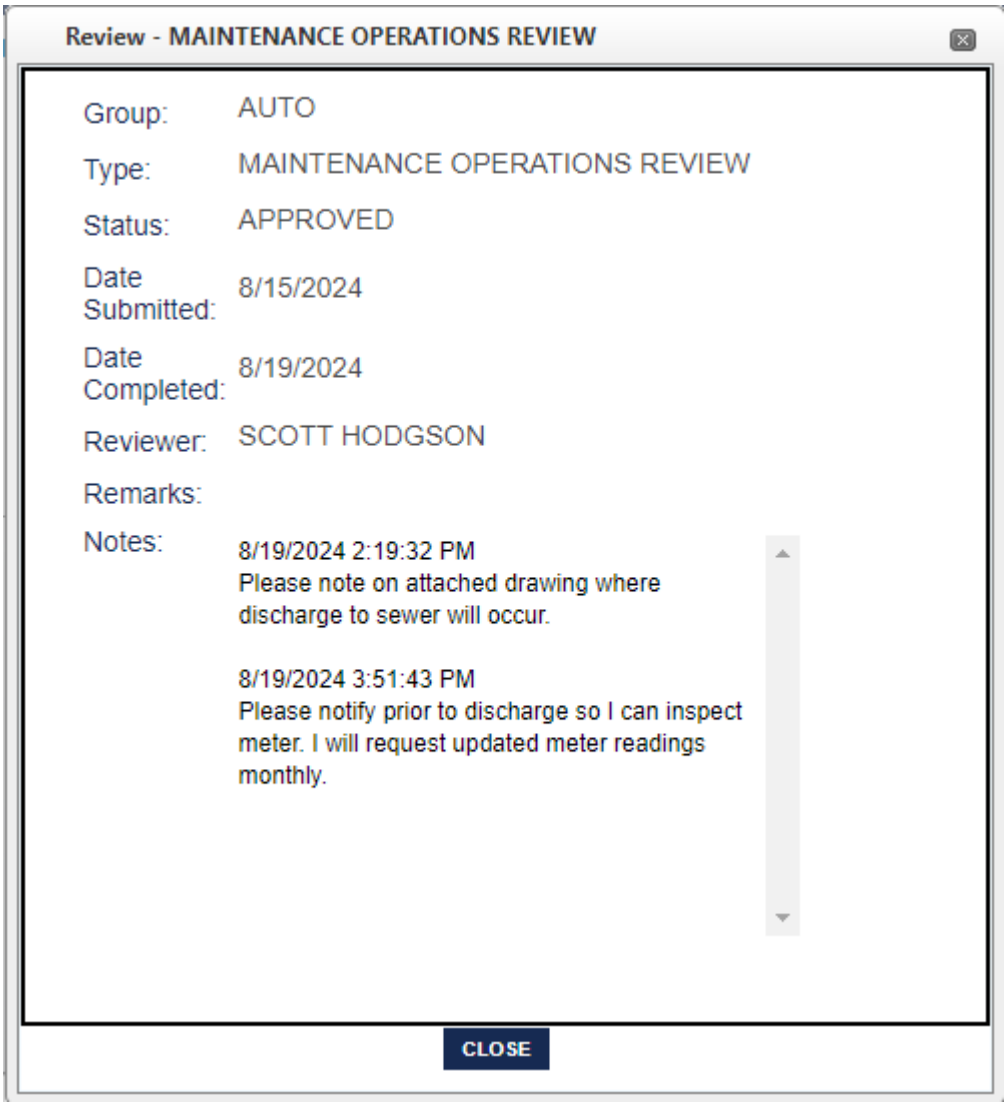
Permit #DAC2408-002

Attachment Inspections

Permit Info | Site Info | Contacts (6) | Fees $0.00 | Inspections(0) | Reviews(1)

Description	Amount	Paid Date
PERCENT CREDIT CARD FEE	$11.50	8/21/2024
DISCHARGE AUTHORIZATION ON GOING	$500.00	8/21/2024

Charged: $511.50 **Balance Due:** $0.00


Review - MAINTENANCE OPERATIONS REVIEW
Group: AUTO
Type: MAINTENANCE OPERATIONS REVIEW
Status: APPROVED
Date Submitted: 8/15/2024
Date Completed: 8/19/2024
Reviewer: SCOTT HODGSON
Remarks:
Notes:
8/19/2024 2:19:32 PM
Please note on attached drawing where discharge to sewer will occur.
8/19/2024 3:51:43 PM
Please notify prior to discharge so I can inspect meter. I will request updated meter readings monthly.
CLOSE

August 30, 2024

Ms. Julie Eagan
Bayshore Construction Co
16821 SMOKEY POINT BLVD , #808
Arlington, WA 98223

Dear Ms. Eagan,

On August 27th, 1 sample was received by our laboratory and assigned our laboratory project number EV24080185. The project was identified as your Port of Everett Water. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Carl Nott
Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE:	8/30/2024
		ALS JOB#:	EV24080185
		ALS SAMPLE#:	EV24080185-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	08/27/2024
CLIENT PROJECT:	Port of Everett Water	COLLECTION DATE:	8/22/2024 12:15:00 PM
CLIENT SAMPLE ID	Port of Everett	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Fats/Oils/Grease (Non-Polar)	EPA-1664	U	5.0	1	MG/L	08/28/2024	MAH
Cyanide	SM4500-CN E	U	0.050	1	MG/L	08/28/2024	MJC
Mercury	EPA-245.1	**0.84**	0.20	1	UG/L	08/27/2024	RAL
Arsenic	EPA-200.8	**39**	5.0	5	UG/L	08/28/2024	EBS
Cadmium	EPA-200.8	U	5.0	5	UG/L	08/28/2024	EBS
Chromium	EPA-200.8	**98**	10	5	UG/L	08/28/2024	EBS
Copper	EPA-200.8	**310**	10	5	UG/L	08/28/2024	EBS
Lead	EPA-200.8	**270**	5.0	5	UG/L	08/28/2024	EBS
Nickel	EPA-200.8	**120**	10	5	UG/L	08/28/2024	EBS
Silver	EPA-200.8	U	5.0	5	UG/L	08/28/2024	EBS
Zinc	EPA-200.8	**460**	12	5	UG/L	08/28/2024	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE:	8/30/2024
		ALS SDG#:	EV24080185
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Water		

LABORATORY BLANK RESULTS

MBLK-R475812 - Batch R475812 - Water by SM4500-CN E

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Cyanide	SM4500-CN E	U	MG/L	0.050	08/28/2024	MJC

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R476036 - Batch R476036 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.20	08/27/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082824W - Batch 216837 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-200.8	U	UG/L	1.0	08/28/2024	EBS
Cadmium	EPA-200.8	U	UG/L	1.0	08/28/2024	EBS
Chromium	EPA-200.8	U	UG/L	2.0	08/28/2024	EBS
Copper	EPA-200.8	U	UG/L	2.0	08/28/2024	EBS
Lead	EPA-200.8	U	UG/L	1.0	08/28/2024	EBS
Nickel	EPA-200.8	U	UG/L	2.0	08/28/2024	EBS
Silver	EPA-200.8	U	UG/L	1.0	08/28/2024	EBS
Zinc	EPA-200.8	U	UG/L	2.5	08/28/2024	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE:	8/30/2024
		ALS SDG#:	EV24080185
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Water		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R475812 - Water by SM4500-CN E

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Cyanide - BS	SM4500-CN E	**98.0**			82	116	08/28/2024	MJC

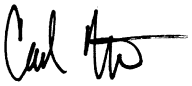
ALS Test Batch ID: R476036 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-245.1	**105**			80.6	118	08/27/2024	RAL
Mercury - BSD	EPA-245.1	**104**	**1**		80.6	118	08/27/2024	RAL

ALS Test Batch ID: 216837 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic - BS	EPA-200.8	**94.3**			89.1	110	08/28/2024	EBS
Arsenic - BSD	EPA-200.8	**98.1**	**4**		89.1	110	08/28/2024	EBS
Cadmium - BS	EPA-200.8	**94.2**			89.4	110	08/28/2024	EBS
Cadmium - BSD	EPA-200.8	**99.3**	**5**		89.4	110	08/28/2024	EBS
Chromium - BS	EPA-200.8	**92.4**			88.3	110.2	08/28/2024	EBS
Chromium - BSD	EPA-200.8	**96.0**	**4**		88.3	110.2	08/28/2024	EBS
Copper - BS	EPA-200.8	**94.3**			85.4	109	08/28/2024	EBS
Copper - BSD	EPA-200.8	**98.0**	**4**		85.4	109	08/28/2024	EBS
Lead - BS	EPA-200.8	**94.4**			87.5	107	08/28/2024	EBS
Lead - BSD	EPA-200.8	**95.5**	**1**		87.5	107	08/28/2024	EBS
Nickel - BS	EPA-200.8	**94.8**			85.4	109	08/28/2024	EBS
Nickel - BSD	EPA-200.8	**99.5**	**5**		85.4	109	08/28/2024	EBS
Silver - BS	EPA-200.8	**94.8**			80	120	08/28/2024	EBS
Silver - BSD	EPA-200.8	**100**	**6**		80	120	08/28/2024	EBS
Zinc - BS	EPA-200.8	**95.4**			88.2	111	08/28/2024	EBS
Zinc - BSD	EPA-200.8	**99.0**	**4**		88.2	111	08/28/2024	EBS

APPROVED BY



Carl Nott
Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)
EV24080185

Date _____ Page _____ Of _____

PROJECT ID: Port of Everett Water
REPORT TO COMPANY: Bayshore Construction
PROJECT MANAGER: Julie Eagan
ADDRESS: 16821 Smokey Pt Blvd #808
Arlington WA 98223
PHONE: 425.268.9703 P.O. #: Marine Terminal
E-MAIL: julie@bayshoreco.com
INVOICE TO COMPANY: Same as above
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐	BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐	MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐	Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐	RCRA-8 ☐	Pri Pol ☐	TAL ☐	Metals Other (Specify) X As, Cd, Cr, Cu, Pb, Ni, Ag, Zn	TCLP-Metals ☐	VOA ☐	Semi-Vol ☐	Pest ☐	Herbs ☐	OTHER (Specify)								NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. Port of Everett	08/22/24	12:15	W	1																										X Hg	X CN	X PSG (non-polar)							6	
2.																																							
3.																																							
4.																																							
5.																																							
6.																																							
7.																																							
8.																																							
9.																																							
10.																																							

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Julie Eagan 8/27/24 12:12
Received By: Jennifer Julia ALS 8/27/24 1212
2. Relinquished By: _____
Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis
10 Standard | 5 | 3 | 2 | 1 ✓ | SAME DAY

Fuels & Hydrocarbon Analysis
5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify: * Best as you can

*Turnaround request less than standard may incur Rush Charge

Appendix F
Import Material Laboratory Reports

September 6, 2024

Ms. Julie Eagan
Bayshore Construction Co
16821 SMOKEY POINT BLVD , #808
Arlington, WA 98223

Dear Ms. Eagan,

On September 3rd, 1 sample was received by our laboratory and assigned our laboratory project number EV24090007. The project was identified as your Port of Everett Fill Material . The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Carl Nott
Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/6/2024 EV24090007 EV24090007-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	09/03/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/30/2024 3:15:00 PM
CLIENT SAMPLE ID	MLM	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	09/03/2024	MNC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	09/04/2024	DHM
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	09/04/2024	DHM
Dichlorodifluoromethane	EPA-8260	U	0.00032	1	MG/KG	09/03/2024	DLC
Chloromethane	EPA-8260	U	0.00029	1	MG/KG	09/03/2024	DLC
Vinyl Chloride	EPA-8260	U	8.50E-06	1	MG/KG	09/03/2024	DLC
Bromomethane	EPA-8260	U	0.00033	1	MG/KG	09/03/2024	DLC
Chloroethane	EPA-8260	U	0.00025	1	MG/KG	09/03/2024	DLC
Carbon Tetrachloride	EPA-8260	U	0.00016	1	MG/KG	09/03/2024	DLC
Trichlorofluoromethane	EPA-8260	U	0.00020	1	MG/KG	09/03/2024	DLC
Carbon Disulfide	EPA-8260	U	0.00050	1	MG/KG	09/03/2024	DLC
Acetone	EPA-8260	U	0.010	1	MG/KG	09/03/2024	DLC
1,1-Dichloroethene	EPA-8260	U	0.00031	1	MG/KG	09/03/2024	DLC
Methylene Chloride	EPA-8260	U	0.0050	1	MG/KG	09/03/2024	DLC
Acrylonitrile	EPA-8260	U	0.00021	1	MG/KG	09/03/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.00033	1	MG/KG	09/03/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.00030	1	MG/KG	09/03/2024	DLC
1,1-Dichloroethane	EPA-8260	U	0.00016	1	MG/KG	09/03/2024	DLC
2-Butanone	EPA-8260	**0.00090**	0.00016	1	MG/KG	09/03/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.00019	1	MG/KG	09/03/2024	DLC
2,2-Dichloropropane	EPA-8260	U	0.00024	1	MG/KG	09/03/2024	DLC
Bromochloromethane	EPA-8260	U	0.00022	1	MG/KG	09/03/2024	DLC
Chloroform	EPA-8260	U	0.00050	1	MG/KG	09/03/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.00032	1	MG/KG	09/03/2024	DLC
1,1-Dichloropropene	EPA-8260	U	0.00027	1	MG/KG	09/03/2024	DLC
1,2-Dichloroethane	EPA-8260	U	9.40E-05	1	MG/KG	09/03/2024	DLC
Benzene	EPA-8260	U	0.00016	1	MG/KG	09/03/2024	DLC
Trichloroethene	EPA-8260	U	0.00017	1	MG/KG	09/03/2024	DLC
1,2-Dichloropropane	EPA-8260	U	0.00010	1	MG/KG	09/03/2024	DLC
Dibromomethane	EPA-8260	U	0.00032	1	MG/KG	09/03/2024	DLC
Bromodichloromethane	EPA-8260	U	9.80E-05	1	MG/KG	09/03/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.00021	1	MG/KG	09/03/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.00038	1	MG/KG	09/03/2024	DLC
Toluene	EPA-8260	U	0.00050	1	MG/KG	09/03/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.00014	1	MG/KG	09/03/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	8.10E-05	1	MG/KG	09/03/2024	DLC
2-Hexanone	EPA-8260	U	0.00055	1	MG/KG	09/03/2024	DLC
1,3-Dichloropropane	EPA-8260	U	5.40E-05	1	MG/KG	09/03/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/6/2024 EV24090007 EV24090007-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	09/03/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/30/2024 3:15:00 PM
CLIENT SAMPLE ID	MLM	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.00020	1	MG/KG	09/03/2024	DLC
Dibromochloromethane	EPA-8260	U	4.80E-05	1	MG/KG	09/03/2024	DLC
1,2-Dibromoethane	EPA-8260	U	7.60E-05	1	MG/KG	09/03/2024	DLC
Chlorobenzene	EPA-8260	U	8.90E-05	1	MG/KG	09/03/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.00012	1	MG/KG	09/03/2024	DLC
Ethylbenzene	EPA-8260	U	0.00013	1	MG/KG	09/03/2024	DLC
m,p-Xylene	EPA-8260	U	0.00026	1	MG/KG	09/03/2024	DLC
Styrene	EPA-8260	U	0.00013	1	MG/KG	09/03/2024	DLC
o-Xylene	EPA-8260	U	0.00016	1	MG/KG	09/03/2024	DLC
Bromoform	EPA-8260	U	0.00011	1	MG/KG	09/03/2024	DLC
Isopropylbenzene	EPA-8260	U	0.00012	1	MG/KG	09/03/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.00023	1	MG/KG	09/03/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.70E-05	1	MG/KG	09/03/2024	DLC
Bromobenzene	EPA-8260	U	0.00015	1	MG/KG	09/03/2024	DLC
N-Propyl Benzene	EPA-8260	U	0.00012	1	MG/KG	09/03/2024	DLC
2-Chlorotoluene	EPA-8260	U	0.00017	1	MG/KG	09/03/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.00018	1	MG/KG	09/03/2024	DLC
4-Chlorotoluene	EPA-8260	U	0.00012	1	MG/KG	09/03/2024	DLC
T-Butyl Benzene	EPA-8260	U	0.00030	1	MG/KG	09/03/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.00017	1	MG/KG	09/03/2024	DLC
S-Butyl Benzene	EPA-8260	U	0.00018	1	MG/KG	09/03/2024	DLC
P-Isopropyltoluene	EPA-8260	U	0.00015	1	MG/KG	09/03/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.00010	1	MG/KG	09/03/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.00013	1	MG/KG	09/03/2024	DLC
N-Butylbenzene	EPA-8260	U	0.00024	1	MG/KG	09/03/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.00011	1	MG/KG	09/03/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	7.10E-05	1	MG/KG	09/03/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.00018	1	MG/KG	09/03/2024	DLC
Hexachlorobutadiene	EPA-8260	U	0.00017	1	MG/KG	09/03/2024	DLC
Naphthalene	EPA-8260	U	0.00012	1	MG/KG	09/03/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	9.30E-05	1	MG/KG	09/03/2024	DLC
Naphthalene	EPA-8270 SIM	U	0.00043	1	MG/KG	09/05/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	U	0.00052	1	MG/KG	09/05/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	U	0.00043	1	MG/KG	09/05/2024	DBA
Acenaphthylene	EPA-8270 SIM	U	0.00038	1	MG/KG	09/05/2024	DBA
Acenaphthene	EPA-8270 SIM	U	0.00035	1	MG/KG	09/05/2024	DBA
Fluorene	EPA-8270 SIM	U	0.00052	1	MG/KG	09/05/2024	DBA
Phenanthrene	EPA-8270 SIM	U	0.00068	1	MG/KG	09/05/2024	DBA
Anthracene	EPA-8270 SIM	U	0.00058	1	MG/KG	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/6/2024 EV24090007 EV24090007-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	09/03/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/30/2024 3:15:00 PM
CLIENT SAMPLE ID	MLM	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Fluoranthene	EPA-8270 SIM	U	0.00055	1	MG/KG	09/05/2024	DBA
Pyrene	EPA-8270 SIM	U	0.00060	1	MG/KG	09/05/2024	DBA
Benzo[A]Anthracene	EPA-8270 SIM	U	0.00044	1	MG/KG	09/05/2024	DBA
Chrysene	EPA-8270 SIM	U	0.00060	1	MG/KG	09/05/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.00059	1	MG/KG	09/05/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.00048	1	MG/KG	09/05/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	U	0.00048	1	MG/KG	09/05/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.00057	1	MG/KG	09/05/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.00067	1	MG/KG	09/05/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.00075	1	MG/KG	09/05/2024	DBA
Pyridine	EPA-8270	U	0.044	1	MG/KG	09/05/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	0.027	1	MG/KG	09/05/2024	DBA
Phenol	EPA-8270	U	0.040	1	MG/KG	09/05/2024	DBA
Aniline	EPA-8270	U	0.046	1	MG/KG	09/05/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.097	1	MG/KG	09/05/2024	DBA
2-Chlorophenol	EPA-8270	U	0.098	1	MG/KG	09/05/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	0.026	1	MG/KG	09/05/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	0.024	1	MG/KG	09/05/2024	DBA
Benzyl Alcohol	EPA-8270	U	0.051	1	MG/KG	09/05/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	0.024	1	MG/KG	09/05/2024	DBA
2-Methylphenol	EPA-8270	U	0.034	1	MG/KG	09/05/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.13	1	MG/KG	09/05/2024	DBA
3&4-Methylphenol	EPA-8270	U	0.043	1	MG/KG	09/05/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.094	1	MG/KG	09/05/2024	DBA
Hexachloroethane	EPA-8270	U	0.020	1	MG/KG	09/05/2024	DBA
Nitrobenzene	EPA-8270	U	0.019	1	MG/KG	09/05/2024	DBA
Isophorone	EPA-8270	U	0.070	1	MG/KG	09/05/2024	DBA
2-Nitrophenol	EPA-8270	U	0.031	1	MG/KG	09/05/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	0.064	1	MG/KG	09/05/2024	DBA
Benzoic Acid	EPA-8270	U	0.71	1	MG/KG	09/05/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.12	1	MG/KG	09/05/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	0.25	1	MG/KG	09/05/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	0.071	1	MG/KG	09/05/2024	DBA
Naphthalene	EPA-8270	U	0.027	1	MG/KG	09/05/2024	DBA
4-Chloroaniline	EPA-8270	U	0.57	1	MG/KG	09/05/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	0.18	1	MG/KG	09/05/2024	DBA
Hexachlorobutadiene	EPA-8270	U	0.13	1	MG/KG	09/05/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	0.32	1	MG/KG	09/05/2024	DBA
2-Methylnaphthalene	EPA-8270	U	0.15	1	MG/KG	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/6/2024 EV24090007 EV24090007-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	09/03/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/30/2024 3:15:00 PM
CLIENT SAMPLE ID	MLM	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1-Methylnaphthalene	EPA-8270	U	0.18	1	MG/KG	09/05/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	0.025	1	MG/KG	09/05/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	0.040	1	MG/KG	09/05/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	0.039	1	MG/KG	09/05/2024	DBA
2-Chloronaphthalene	EPA-8270	U	0.032	1	MG/KG	09/05/2024	DBA
2-Nitroaniline	EPA-8270	U	0.019	1	MG/KG	09/05/2024	DBA
Acenaphthylene	EPA-8270	U	0.026	1	MG/KG	09/05/2024	DBA
Dimethylphthalate	EPA-8270	U	0.042	1	MG/KG	09/05/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	0.037	1	MG/KG	09/05/2024	DBA
Acenaphthene	EPA-8270	U	0.028	1	MG/KG	09/05/2024	DBA
3-Nitroaniline	EPA-8270	U	0.58	1	MG/KG	09/05/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	0.053	1	MG/KG	09/05/2024	DBA
4-Nitrophenol	EPA-8270	U	0.055	1	MG/KG	09/05/2024	DBA
Dibenzofuran	EPA-8270	U	0.032	1	MG/KG	09/05/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	0.022	1	MG/KG	09/05/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.050	1	MG/KG	09/05/2024	DBA
Diethylphthalate	EPA-8270	U	0.042	1	MG/KG	09/05/2024	DBA
Fluorene	EPA-8270	U	0.035	1	MG/KG	09/05/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	0.041	1	MG/KG	09/05/2024	DBA
4-Nitroaniline	EPA-8270	U	0.13	1	MG/KG	09/05/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.028	1	MG/KG	09/05/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	0.034	1	MG/KG	09/05/2024	DBA
Azobenzene	EPA-8270	U	0.044	1	MG/KG	09/05/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	0.036	1	MG/KG	09/05/2024	DBA
Hexachlorobenzene	EPA-8270	U	0.036	1	MG/KG	09/05/2024	DBA
Pentachlorophenol	EPA-8270	U	0.15	1	MG/KG	09/05/2024	DBA
Phenanthrene	EPA-8270	U	0.026	1	MG/KG	09/05/2024	DBA
Anthracene	EPA-8270	U	0.023	1	MG/KG	09/05/2024	DBA
Carbazole	EPA-8270	U	0.11	1	MG/KG	09/05/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	0.034	1	MG/KG	09/05/2024	DBA
Fluoranthene	EPA-8270	U	0.030	1	MG/KG	09/05/2024	DBA
Pyrene	EPA-8270	U	0.030	1	MG/KG	09/05/2024	DBA
Butylbenzylphthalate	EPA-8270	U	0.023	1	MG/KG	09/05/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	0.17	1	MG/KG	09/05/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	0.026	1	MG/KG	09/05/2024	DBA
Chrysene	EPA-8270	U	0.031	1	MG/KG	09/05/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.022	1	MG/KG	09/05/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	0.022	1	MG/KG	09/05/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	0.022	1	MG/KG	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/6/2024 EV24090007 EV24090007-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	09/03/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/30/2024 3:15:00 PM
CLIENT SAMPLE ID	MLM	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene	EPA-8270	U	0.042	1	MG/KG	09/05/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	0.019	1	MG/KG	09/05/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.024	1	MG/KG	09/05/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	0.022	1	MG/KG	09/05/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	0.034	1	MG/KG	09/05/2024	DBA
PCB-1016	EPA-8082	U	0.00095	1	MG/KG	09/06/2024	DBA
PCB-1221	EPA-8082	U	0.00095	1	MG/KG	09/06/2024	DBA
PCB-1232	EPA-8082	U	0.00095	1	MG/KG	09/06/2024	DBA
PCB-1242	EPA-8082	U	0.00095	1	MG/KG	09/06/2024	DBA
PCB-1248	EPA-8082	U	0.00095	1	MG/KG	09/06/2024	DBA
PCB-1254	EPA-8082	U	0.00095	1	MG/KG	09/06/2024	DBA
PCB-1260	EPA-8082	U	0.00095	1	MG/KG	09/06/2024	DBA
PCB-1268	EPA-8082	U	0.00095	1	MG/KG	09/06/2024	DBA
Mercury	EPA-7471	**0.055**	0.020	1	MG/KG	09/06/2024	RAL
Antimony	EPA-6020	**0.16**	0.10	1	MG/KG	09/06/2024	EBS
Arsenic	EPA-6020	**4.5**	0.20	1	MG/KG	09/06/2024	EBS
Beryllium	EPA-6020	**0.20**	0.10	1	MG/KG	09/06/2024	EBS
Cadmium	EPA-6020	**0.10**	0.10	1	MG/KG	09/06/2024	EBS
Chromium	EPA-6020	**32**	0.10	1	MG/KG	09/06/2024	EBS
Copper	EPA-6020	**36**	1.0	1	MG/KG	09/06/2024	EBS
Lead	EPA-6020	**5.0**	0.10	1	MG/KG	09/06/2024	EBS
Nickel	EPA-6020	**46**	0.50	1	MG/KG	09/06/2024	EBS
Selenium	EPA-6020	U	1.0	1	MG/KG	09/06/2024	EBS
Silver	EPA-6020	U	0.10	1	MG/KG	09/06/2024	EBS
Thallium	EPA-6020	U	0.50	1	MG/KG	09/06/2024	EBS
Zinc	EPA-6020	**65**	1.0	1	MG/KG	09/06/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**92.5**	09/03/2024	MNC
C25	NWTPH-DX w/ SGA	**105**	09/04/2024	DHM
1,2-Dichloroethane-d4	EPA-8260	**121**	09/03/2024	DLC
Toluene-d8	EPA-8260	**92.4**	09/03/2024	DLC
4-Bromofluorobenzene	EPA-8260	**100**	09/03/2024	DLC
Terphenyl-d14	EPA-8270 SIM	**65.6**	09/05/2024	DBA
2-Fluorophenol	EPA-8270	**101**	09/05/2024	DBA
Phenol-d5	EPA-8270	**101**	09/05/2024	DBA
Nitrobenzene-d5	EPA-8270	**82.8**	09/05/2024	DBA
2-Fluorobiphenyl	EPA-8270	**87.3**	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/6/2024 EV24090007 EV24090007-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	09/03/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/30/2024 3:15:00 PM
CLIENT SAMPLE ID	MLM	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2,4,6-Tribromophenol	EPA-8270	**76.6**	09/05/2024	DBA
Terphenyl-d14	EPA-8270	**108**	09/05/2024	DBA
TCMX	EPA-8082	**106**	09/06/2024	DBA
DCB	EPA-8082	**106**	09/06/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

Soil results reported on a dry-weight basis.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE:	9/6/2024
		ALS SDG#:	EV24090007
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY BLANK RESULTS

MBG-090324S - Batch 217166 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	MG/KG	3.0	09/03/2024	MNC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-090324S - Batch 217043 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	MG/KG	25	09/03/2024	DHM
TPH-Oil Range	NWTPH-DX	U	MG/KG	50	09/03/2024	DHM

U - Analyte analyzed for but not detected at level above reporting limit.

MB-090324S - Batch 217147 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	MG/KG	0.00046	09/03/2024	DLC
Chloromethane	EPA-8260	U	MG/KG	0.00042	09/03/2024	DLC
Vinyl Chloride	EPA-8260	U	MG/KG	0.000012	09/03/2024	DLC
Bromomethane	EPA-8260	U	MG/KG	0.00048	09/03/2024	DLC
Chloroethane	EPA-8260	U	MG/KG	0.00035	09/03/2024	DLC
Carbon Tetrachloride	EPA-8260	U	MG/KG	0.00023	09/03/2024	DLC
Trichlorofluoromethane	EPA-8260	U	MG/KG	0.00029	09/03/2024	DLC
Carbon Disulfide	EPA-8260	U	MG/KG	0.00050	09/03/2024	DLC
Acetone	EPA-8260	U	MG/KG	0.010	09/03/2024	DLC
1,1-Dichloroethene	EPA-8260	U	MG/KG	0.00045	09/03/2024	DLC
Methylene Chloride	EPA-8260	U	MG/KG	0.0050	09/03/2024	DLC
Acrylonitrile	EPA-8260	U	MG/KG	0.00030	09/03/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	MG/KG	0.00047	09/03/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	MG/KG	0.00042	09/03/2024	DLC
1,1-Dichloroethane	EPA-8260	U	MG/KG	0.00024	09/03/2024	DLC
2-Butanone	EPA-8260	U	MG/KG	0.00023	09/03/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	MG/KG	0.00027	09/03/2024	DLC
2,2-Dichloropropane	EPA-8260	U	MG/KG	0.00034	09/03/2024	DLC
Bromochloromethane	EPA-8260	U	MG/KG	0.00031	09/03/2024	DLC
Chloroform	EPA-8260	U	MG/KG	0.00050	09/03/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	MG/KG	0.00046	09/03/2024	DLC
1,1-Dichloropropene	EPA-8260	U	MG/KG	0.00038	09/03/2024	DLC
1,2-Dichloroethane	EPA-8260	U	MG/KG	0.00013	09/03/2024	DLC
Benzene	EPA-8260	U	MG/KG	0.00023	09/03/2024	DLC
Trichloroethene	EPA-8260	U	MG/KG	0.00025	09/03/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS SDG#: WDOE ACCREDITATION:	9/6/2024 EV24090007 C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY BLANK RESULTS

MB-090324S - Batch 217147 - Soil by EPA-8260

1,2-Dichloropropane	EPA-8260	U	MG/KG	0.00014	09/03/2024	DLC
Dibromomethane	EPA-8260	U	MG/KG	0.00046	09/03/2024	DLC
Bromodichloromethane	EPA-8260	U	MG/KG	0.00014	09/03/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	MG/KG	0.00030	09/03/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	MG/KG	0.00055	09/03/2024	DLC
Toluene	EPA-8260	U	MG/KG	0.00050	09/03/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	MG/KG	0.00019	09/03/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	MG/KG	0.00012	09/03/2024	DLC
2-Hexanone	EPA-8260	U	MG/KG	0.00079	09/03/2024	DLC
1,3-Dichloropropane	EPA-8260	U	MG/KG	0.000077	09/03/2024	DLC
Tetrachloroethylene	EPA-8260	U	MG/KG	0.00029	09/03/2024	DLC
Dibromochloromethane	EPA-8260	U	MG/KG	0.000068	09/03/2024	DLC
1,2-Dibromoethane	EPA-8260	U	MG/KG	0.00011	09/03/2024	DLC
Chlorobenzene	EPA-8260	U	MG/KG	0.00013	09/03/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	MG/KG	0.00018	09/03/2024	DLC
Ethylbenzene	EPA-8260	U	MG/KG	0.00019	09/03/2024	DLC
m,p-Xylene	EPA-8260	U	MG/KG	0.00037	09/03/2024	DLC
Styrene	EPA-8260	U	MG/KG	0.00018	09/03/2024	DLC
o-Xylene	EPA-8260	U	MG/KG	0.00024	09/03/2024	DLC
Bromoform	EPA-8260	U	MG/KG	0.00016	09/03/2024	DLC
Isopropylbenzene	EPA-8260	U	MG/KG	0.00017	09/03/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	MG/KG	0.00032	09/03/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	MG/KG	0.000038	09/03/2024	DLC
Bromobenzene	EPA-8260	U	MG/KG	0.00021	09/03/2024	DLC
N-Propyl Benzene	EPA-8260	U	MG/KG	0.00018	09/03/2024	DLC
2-Chlorotoluene	EPA-8260	U	MG/KG	0.00024	09/03/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	MG/KG	0.00025	09/03/2024	DLC
4-Chlorotoluene	EPA-8260	U	MG/KG	0.00017	09/03/2024	DLC
T-Butyl Benzene	EPA-8260	U	MG/KG	0.00043	09/03/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	MG/KG	0.00024	09/03/2024	DLC
S-Butyl Benzene	EPA-8260	U	MG/KG	0.00026	09/03/2024	DLC
P-Isopropyltoluene	EPA-8260	U	MG/KG	0.00022	09/03/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	MG/KG	0.00015	09/03/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	MG/KG	0.00018	09/03/2024	DLC
N-Butylbenzene	EPA-8260	U	MG/KG	0.00034	09/03/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	MG/KG	0.00016	09/03/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	MG/KG	0.00010	09/03/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	MG/KG	0.00026	09/03/2024	DLC
Hexachlorobutadiene	EPA-8260	U	MG/KG	0.00024	09/03/2024	DLC
Naphthalene	EPA-8260	U	MG/KG	0.00018	09/03/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	MG/KG	0.00013	09/03/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE:	9/6/2024
		ALS SDG#:	EV24090007
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY BLANK RESULTS

MB-090324S - Batch 217147 - Soil by EPA-8260

U - Analyte analyzed for but not detected at level above reporting limit.

MB2-090524S - Batch 217181 - Soil by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	MG/KG	0.00080	09/05/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	U	MG/KG	0.00097	09/05/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	U	MG/KG	0.00080	09/05/2024	DBA
Acenaphthylene	EPA-8270 SIM	U	MG/KG	0.00071	09/05/2024	DBA
Acenaphthene	EPA-8270 SIM	U	MG/KG	0.00066	09/05/2024	DBA
Fluorene	EPA-8270 SIM	U	MG/KG	0.00096	09/05/2024	DBA
Phenanthrene	EPA-8270 SIM	U	MG/KG	0.0013	09/05/2024	DBA
Anthracene	EPA-8270 SIM	U	MG/KG	0.0011	09/05/2024	DBA
Fluoranthene	EPA-8270 SIM	U	MG/KG	0.0010	09/05/2024	DBA
Pyrene	EPA-8270 SIM	U	MG/KG	0.0011	09/05/2024	DBA
Benzo[A]Anthracene	EPA-8270 SIM	U	MG/KG	0.00082	09/05/2024	DBA
Chrysene	EPA-8270 SIM	U	MG/KG	0.0011	09/05/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	U	MG/KG	0.0011	09/05/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	U	MG/KG	0.00090	09/05/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	U	MG/KG	0.00089	09/05/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	MG/KG	0.0011	09/05/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	MG/KG	0.0012	09/05/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	MG/KG	0.0014	09/05/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

MB-090524S - Batch 217180 - Soil by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	MG/KG	0.12	09/05/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	MG/KG	0.070	09/05/2024	DBA
Phenol	EPA-8270	U	MG/KG	0.050	09/05/2024	DBA
Aniline	EPA-8270	U	MG/KG	0.058	09/05/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	MG/KG	0.12	09/05/2024	DBA
2-Chlorophenol	EPA-8270	U	MG/KG	0.12	09/05/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	MG/KG	0.067	09/05/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	MG/KG	0.060	09/05/2024	DBA
Benzyl Alcohol	EPA-8270	U	MG/KG	0.064	09/05/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	MG/KG	0.066	09/05/2024	DBA
2-Methylphenol	EPA-8270	U	MG/KG	0.090	09/05/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	MG/KG	0.16	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS SDG#: WDOE ACCREDITATION:	9/6/2024 EV24090007 C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY BLANK RESULTS

MB-090524S - Batch 217180 - Soil by EPA-8270

3&4-Methylphenol	EPA-8270	U	MG/KG	0.097	09/05/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	MG/KG	0.12	09/05/2024	DBA
Hexachloroethane	EPA-8270	U	MG/KG	0.082	09/05/2024	DBA
Nitrobenzene	EPA-8270	U	MG/KG	0.069	09/05/2024	DBA
Isophorone	EPA-8270	U	MG/KG	0.087	09/05/2024	DBA
2-Nitrophenol	EPA-8270	U	MG/KG	0.090	09/05/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	MG/KG	0.080	09/05/2024	DBA
Benzoic Acid	EPA-8270	U	MG/KG	0.89	09/05/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	MG/KG	0.15	09/05/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	MG/KG	0.31	09/05/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	MG/KG	0.088	09/05/2024	DBA
Naphthalene	EPA-8270	U	MG/KG	0.079	09/05/2024	DBA
4-Chloroaniline	EPA-8270	U	MG/KG	0.71	09/05/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	MG/KG	0.23	09/05/2024	DBA
Hexachlorobutadiene	EPA-8270	U	MG/KG	0.16	09/05/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	MG/KG	0.40	09/05/2024	DBA
2-Methylnaphthalene	EPA-8270	U	MG/KG	0.19	09/05/2024	DBA
1-Methylnaphthalene	EPA-8270	U	MG/KG	0.22	09/05/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	MG/KG	0.087	09/05/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	MG/KG	0.066	09/05/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	MG/KG	0.079	09/05/2024	DBA
2-Chloronaphthalene	EPA-8270	U	MG/KG	0.078	09/05/2024	DBA
2-Nitroaniline	EPA-8270	U	MG/KG	0.081	09/05/2024	DBA
Acenaphthylene	EPA-8270	U	MG/KG	0.081	09/05/2024	DBA
Dimethylphthalate	EPA-8270	U	MG/KG	0.081	09/05/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	MG/KG	0.079	09/05/2024	DBA
Acenaphthene	EPA-8270	U	MG/KG	0.078	09/05/2024	DBA
3-Nitroaniline	EPA-8270	U	MG/KG	0.72	09/05/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	MG/KG	0.089	09/05/2024	DBA
4-Nitrophenol	EPA-8270	U	MG/KG	0.086	09/05/2024	DBA
Dibenzofuran	EPA-8270	U	MG/KG	0.093	09/05/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	MG/KG	0.085	09/05/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	MG/KG	0.065	09/05/2024	DBA
Diethylphthalate	EPA-8270	U	MG/KG	0.084	09/05/2024	DBA
Fluorene	EPA-8270	U	MG/KG	0.089	09/05/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	MG/KG	0.095	09/05/2024	DBA
4-Nitroaniline	EPA-8270	U	MG/KG	0.15	09/05/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	MG/KG	0.29	09/05/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	MG/KG	0.50	09/05/2024	DBA
Azobenzene	EPA-8270	U	MG/KG	0.062	09/05/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	MG/KG	0.086	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS SDG#: WDOE ACCREDITATION:	9/6/2024 EV24090007 C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY BLANK RESULTS

MB-090524S - Batch 217180 - Soil by EPA-8270

Hexachlorobenzene	EPA-8270	U	MG/KG	0.099	09/05/2024	DBA
Pentachlorophenol	EPA-8270	U	MG/KG	0.18	09/05/2024	DBA
Phenanthrene	EPA-8270	U	MG/KG	0.099	09/05/2024	DBA
Anthracene	EPA-8270	U	MG/KG	0.084	09/05/2024	DBA
Carbazole	EPA-8270	U	MG/KG	0.14	09/05/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	MG/KG	0.076	09/05/2024	DBA
Fluoranthene	EPA-8270	U	MG/KG	0.10	09/05/2024	DBA
Pyrene	EPA-8270	U	MG/KG	0.15	09/05/2024	DBA
Butylbenzylphthalate	EPA-8270	U	MG/KG	0.083	09/05/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	MG/KG	0.21	09/05/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	MG/KG	0.078	09/05/2024	DBA
Chrysene	EPA-8270	U	MG/KG	0.090	09/05/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	MG/KG	0.10	09/05/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	MG/KG	0.088	09/05/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	MG/KG	0.084	09/05/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	MG/KG	0.087	09/05/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	MG/KG	0.053	09/05/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	MG/KG	0.069	09/05/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	MG/KG	0.065	09/05/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	MG/KG	0.094	09/05/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

MB-090524S - Batch 217182 - Soil by EPA-8082

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	MG/KG	0.0012	09/06/2024	DBA
PCB-1221	EPA-8082	U	MG/KG	0.0012	09/06/2024	DBA
PCB-1232	EPA-8082	U	MG/KG	0.0012	09/06/2024	DBA
PCB-1242	EPA-8082	U	MG/KG	0.0012	09/06/2024	DBA
PCB-1248	EPA-8082	U	MG/KG	0.0012	09/06/2024	DBA
PCB-1254	EPA-8082	U	MG/KG	0.0012	09/06/2024	DBA
PCB-1260	EPA-8082	U	MG/KG	0.0012	09/06/2024	DBA
PCB-1268	EPA-8082	U	MG/KG	0.0012	09/06/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R476553 - Batch R476553 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	09/06/2024	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE:	9/6/2024
		ALS SDG#:	EV24090007
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY BLANK RESULTS

MBLK-R476553 - Batch R476553 - Soil by EPA-7471

U - Analyte analyzed for but not detected at level above reporting limit.

MB-090624S - Batch 217226 - Soil by EPA-6020

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Antimony	EPA-6020	U	MG/KG	0.10	09/06/2024	EBS
Arsenic	EPA-6020	U	MG/KG	0.20	09/06/2024	EBS
Beryllium	EPA-6020	U	MG/KG	0.10	09/06/2024	EBS
Cadmium	EPA-6020	U	MG/KG	0.10	09/06/2024	EBS
Chromium	EPA-6020	U	MG/KG	0.10	09/06/2024	EBS
Copper	EPA-6020	U	MG/KG	1.0	09/06/2024	EBS
Lead	EPA-6020	U	MG/KG	0.10	09/06/2024	EBS
Nickel	EPA-6020	U	MG/KG	0.50	09/06/2024	EBS
Selenium	EPA-6020	U	MG/KG	1.0	09/06/2024	EBS
Silver	EPA-6020	U	MG/KG	0.10	09/06/2024	EBS
Thallium	EPA-6020	U	MG/KG	0.50	09/06/2024	EBS
Zinc	EPA-6020	U	MG/KG	1.0	09/06/2024	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS SDG#: WDOE ACCREDITATION:	9/6/2024 EV24090007 C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 217166 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**94.9**			66.5	122.7	09/03/2024	MNC
TPH-Volatile Range - BSD	NWTPH-GX	**91.7**	**3**		66.5	122.7	09/03/2024	MNC

ALS Test Batch ID: 217043 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**80.4**			75.5	122.1	09/03/2024	DHM
TPH-Diesel Range - BSD	NWTPH-DX	**102**	**23**	SR1	75.5	122.1	09/03/2024	DHM

SR1 - RPD outside of control limits.

ALS Test Batch ID: 217147 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - BS	EPA-8260	**132**			50	150	09/03/2024	DLC
Dichlorodifluoromethane - BSD	EPA-8260	**130**	**1**		50	150	09/03/2024	DLC
Chloromethane - BS	EPA-8260	**112**			50	150	09/03/2024	DLC
Chloromethane - BSD	EPA-8260	**112**	**0**		50	150	09/03/2024	DLC
Vinyl Chloride - BS	EPA-8260	**114**			50	150	09/03/2024	DLC
Vinyl Chloride - BSD	EPA-8260	**113**	**1**		50	150	09/03/2024	DLC
Bromomethane - BS	EPA-8260	**92.8**			50	150	09/03/2024	DLC
Bromomethane - BSD	EPA-8260	**94.5**	**2**		50	150	09/03/2024	DLC
Chloroethane - BS	EPA-8260	**111**			50	150	09/03/2024	DLC
Chloroethane - BSD	EPA-8260	**110**	**1**		50	150	09/03/2024	DLC
Carbon Tetrachloride - BS	EPA-8260	**114**			50	150	09/03/2024	DLC
Carbon Tetrachloride - BSD	EPA-8260	**113**	**1**		50	150	09/03/2024	DLC
Trichlorofluoromethane - BS	EPA-8260	**110**			50	150	09/03/2024	DLC
Trichlorofluoromethane - BSD	EPA-8260	**109**	**1**		50	150	09/03/2024	DLC
Carbon Disulfide - BS	EPA-8260	**109**			50	150	09/03/2024	DLC
Carbon Disulfide - BSD	EPA-8260	**108**	**1**		50	150	09/03/2024	DLC
Acetone - BS	EPA-8260	**148**			50	150	09/03/2024	DLC
Acetone - BSD	EPA-8260	**165**	**11**	LCS03	50	150	09/03/2024	DLC
1,1-Dichloroethene - BS	EPA-8260	**112**			70	130	09/03/2024	DLC
1,1-Dichloroethene - BSD	EPA-8260	**111**	**1**		70	130	09/03/2024	DLC
Methylene Chloride - BS	EPA-8260	**152**		LCS03	50	150	09/03/2024	DLC
Methylene Chloride - BSD	EPA-8260	**145**	**5**		50	150	09/03/2024	DLC
Acrylonitrile - BS	EPA-8260	**113**			50	150	09/03/2024	DLC
Acrylonitrile - BSD	EPA-8260	**113**	**1**		50	150	09/03/2024	DLC
Methyl T-Butyl Ether - BS	EPA-8260	**116**			50	150	09/03/2024	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	**118**	**2**		50	150	09/03/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 SMOKEY POINT BLVD , #808
Arlington, WA 98223

DATE: 9/6/2024
ALS SDG#: EV24090007
WDOE ACCREDITATION: C601

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Trans-1,2-Dichloroethene - BS	EPA-8260	**110**			50	150	09/03/2024	DLC
Trans-1,2-Dichloroethene - BSD	EPA-8260	**109**	**1**		50	150	09/03/2024	DLC
1,1-Dichloroethane - BS	EPA-8260	**110**			50	150	09/03/2024	DLC
1,1-Dichloroethane - BSD	EPA-8260	**110**	**0**		50	150	09/03/2024	DLC
2-Butanone - BS	EPA-8260	**149**			50	150	09/03/2024	DLC
2-Butanone - BSD	EPA-8260	**160**	**7**	LCS03	50	150	09/03/2024	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	**110**			50	150	09/03/2024	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	**110**	**0**		50	150	09/03/2024	DLC
2,2-Dichloropropane - BS	EPA-8260	**114**			50	150	09/03/2024	DLC
2,2-Dichloropropane - BSD	EPA-8260	**113**	**1**		50	150	09/03/2024	DLC
Bromochloromethane - BS	EPA-8260	**108**			50	150	09/03/2024	DLC
Bromochloromethane - BSD	EPA-8260	**109**	**1**		50	150	09/03/2024	DLC
Chloroform - BS	EPA-8260	**84.3**			50	150	09/03/2024	DLC
Chloroform - BSD	EPA-8260	**85.7**	**2**		50	150	09/03/2024	DLC
1,1,1-Trichloroethane - BS	EPA-8260	**113**			50	150	09/03/2024	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	**112**	**1**		50	150	09/03/2024	DLC
1,1-Dichloropropene - BS	EPA-8260	**112**			50	150	09/03/2024	DLC
1,1-Dichloropropene - BSD	EPA-8260	**110**	**2**		50	150	09/03/2024	DLC
1,2-Dichloroethane - BS	EPA-8260	**112**			50	150	09/03/2024	DLC
1,2-Dichloroethane - BSD	EPA-8260	**112**	**0**		50	150	09/03/2024	DLC
Benzene - BS	EPA-8260	**108**			75	138	09/03/2024	DLC
Benzene - BSD	EPA-8260	**107**	**1**		75	138	09/03/2024	DLC
Trichloroethene - BS	EPA-8260	**108**			75	136	09/03/2024	DLC
Trichloroethene - BSD	EPA-8260	**106**	**2**		75	136	09/03/2024	DLC
1,2-Dichloropropane - BS	EPA-8260	**111**			50	150	09/03/2024	DLC
1,2-Dichloropropane - BSD	EPA-8260	**112**	**0**		50	150	09/03/2024	DLC
Dibromomethane - BS	EPA-8260	**117**			50	150	09/03/2024	DLC
Dibromomethane - BSD	EPA-8260	**117**	**0**		50	150	09/03/2024	DLC
Bromodichloromethane - BS	EPA-8260	**114**			50	150	09/03/2024	DLC
Bromodichloromethane - BSD	EPA-8260	**114**	**1**		50	150	09/03/2024	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260	**115**			50	150	09/03/2024	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260	**116**	**0**		50	150	09/03/2024	DLC
4-Methyl-2-Pentanone - BS	EPA-8260	**107**			50	150	09/03/2024	DLC
4-Methyl-2-Pentanone - BSD	EPA-8260	**111**	**4**		50	150	09/03/2024	DLC
Toluene - BS	EPA-8260	**110**			71.6	122.1	09/03/2024	DLC
Toluene - BSD	EPA-8260	**109**	**1**		71.6	122.1	09/03/2024	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	**119**			50	150	09/03/2024	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	**118**	**1**		50	150	09/03/2024	DLC
1,1,2-Trichloroethane - BS	EPA-8260	**111**			50	150	09/03/2024	DLC
1,1,2-Trichloroethane - BSD	EPA-8260	**111**	**0**		50	150	09/03/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 SMOKEY POINT BLVD , #808
Arlington, WA 98223

DATE: 9/6/2024
ALS SDG#: EV24090007
WDOE ACCREDITATION: C601

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
2-Hexanone - BS	EPA-8260	**104**			50	150	09/03/2024	DLC
2-Hexanone - BSD	EPA-8260	**111**	**7**		50	150	09/03/2024	DLC
1,3-Dichloropropane - BS	EPA-8260	**109**			50	150	09/03/2024	DLC
1,3-Dichloropropane - BSD	EPA-8260	**110**	**1**		50	150	09/03/2024	DLC
Tetrachloroethylene - BS	EPA-8260	**113**			50	150	09/03/2024	DLC
Tetrachloroethylene - BSD	EPA-8260	**115**	**2**		50	150	09/03/2024	DLC
Dibromochloromethane - BS	EPA-8260	**116**			50	150	09/03/2024	DLC
Dibromochloromethane - BSD	EPA-8260	**117**	**1**		50	150	09/03/2024	DLC
1,2-Dibromoethane - BS	EPA-8260	**112**			50	150	09/03/2024	DLC
1,2-Dibromoethane - BSD	EPA-8260	**113**	**1**		50	150	09/03/2024	DLC
Chlorobenzene - BS	EPA-8260	**106**			79	128	09/03/2024	DLC
Chlorobenzene - BSD	EPA-8260	**105**	**1**		79	128	09/03/2024	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260	**112**			50	150	09/03/2024	DLC
1,1,1,2-Tetrachloroethane - BSD	EPA-8260	**112**	**0**		50	150	09/03/2024	DLC
Ethylbenzene - BS	EPA-8260	**106**			50	150	09/03/2024	DLC
Ethylbenzene - BSD	EPA-8260	**104**	**1**		50	150	09/03/2024	DLC
m,p-Xylene - BS	EPA-8260	**105**			50	150	09/03/2024	DLC
m,p-Xylene - BSD	EPA-8260	**103**	**2**		50	150	09/03/2024	DLC
Styrene - BS	EPA-8260	**107**			50	150	09/03/2024	DLC
Styrene - BSD	EPA-8260	**106**	**1**		50	150	09/03/2024	DLC
o-Xylene - BS	EPA-8260	**106**			50	150	09/03/2024	DLC
o-Xylene - BSD	EPA-8260	**106**	**0**		50	150	09/03/2024	DLC
Bromoform - BS	EPA-8260	**102**			50	150	09/03/2024	DLC
Bromoform - BSD	EPA-8260	**103**	**1**		50	150	09/03/2024	DLC
Isopropylbenzene - BS	EPA-8260	**103**			50	150	09/03/2024	DLC
Isopropylbenzene - BSD	EPA-8260	**102**	**2**		50	150	09/03/2024	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260	**99.4**			50	150	09/03/2024	DLC
1,1,2,2-Tetrachloroethane - BSD	EPA-8260	**103**	**4**		50	150	09/03/2024	DLC
1,2,3-Trichloropropane - BS	EPA-8260	**98.9**			50	150	09/03/2024	DLC
1,2,3-Trichloropropane - BSD	EPA-8260	**104**	**5**		50	150	09/03/2024	DLC
Bromobenzene - BS	EPA-8260	**102**			50	150	09/03/2024	DLC
Bromobenzene - BSD	EPA-8260	**104**	**2**		50	150	09/03/2024	DLC
N-Propyl Benzene - BS	EPA-8260	**94.2**			50	150	09/03/2024	DLC
N-Propyl Benzene - BSD	EPA-8260	**94.9**	**1**		50	150	09/03/2024	DLC
2-Chlorotoluene - BS	EPA-8260	**99.6**			50	150	09/03/2024	DLC
2-Chlorotoluene - BSD	EPA-8260	**100**	**1**		50	150	09/03/2024	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	**96.8**			50	150	09/03/2024	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	**96.4**	**0**		50	150	09/03/2024	DLC
4-Chlorotoluene - BS	EPA-8260	**97.1**			50	150	09/03/2024	DLC
4-Chlorotoluene - BSD	EPA-8260	**98.5**	**1**		50	150	09/03/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS SDG#: WDOE ACCREDITATION:	9/6/2024 EV24090007 C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
T-Butyl Benzene - BS	EPA-8260	**100**			50	150	09/03/2024	DLC
T-Butyl Benzene - BSD	EPA-8260	**102**	**2**		50	150	09/03/2024	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	**97.8**			50	150	09/03/2024	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	**98.2**	**0**		50	150	09/03/2024	DLC
S-Butyl Benzene - BS	EPA-8260	**94.7**			50	150	09/03/2024	DLC
S-Butyl Benzene - BSD	EPA-8260	**95.5**	**1**		50	150	09/03/2024	DLC
P-Isopropyltoluene - BS	EPA-8260	**96.3**			50	150	09/03/2024	DLC
P-Isopropyltoluene - BSD	EPA-8260	**96.7**	**0**		50	150	09/03/2024	DLC
1,3-Dichlorobenzene - BS	EPA-8260	**102**			50	150	09/03/2024	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	**102**	**0**		50	150	09/03/2024	DLC
1,4-Dichlorobenzene - BS	EPA-8260	**100**			50	150	09/03/2024	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	**100**	**0**		50	150	09/03/2024	DLC
N-Butylbenzene - BS	EPA-8260	**96.3**			50	150	09/03/2024	DLC
N-Butylbenzene - BSD	EPA-8260	**96.0**	**0**		50	150	09/03/2024	DLC
1,2-Dichlorobenzene - BS	EPA-8260	**99.3**			50	150	09/03/2024	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	**99.7**	**0**		50	150	09/03/2024	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	**95.1**			50	150	09/03/2024	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	**96.2**	**1**		50	150	09/03/2024	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260	**92.8**			50	150	09/03/2024	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260	**69.2**	**29**	SR1	50	150	09/03/2024	DLC
Hexachlorobutadiene - BS	EPA-8260	**89.2**			50	150	09/03/2024	DLC
Hexachlorobutadiene - BSD	EPA-8260	**74.1**	**19**		50	150	09/03/2024	DLC
Naphthalene - BS	EPA-8260	**84.9**			50	150	09/03/2024	DLC
Naphthalene - BSD	EPA-8260	**64.2**	**28**	SR1	50	150	09/03/2024	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	**98.1**			50	150	09/03/2024	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	**70.5**	**33**	SR1	50	150	09/03/2024	DLC

LCS03 - The LCS and/or LCSD recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is required for this analyte.
SR1 - RPD outside of control limits.

ALS Test Batch ID: 217180 - Soil by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**156**		LCS03	20	150	09/05/2024	DBA
Pyridine - BSD	EPA-8270	**131**	**18**		20	150	09/05/2024	DBA
N-Nitrosodimethylamine - BS	EPA-8270	**74.7**			20	150	09/05/2024	DBA
N-Nitrosodimethylamine - BSD	EPA-8270	**68.5**	**9**		20	150	09/05/2024	DBA
Phenol - BS	EPA-8270	**83.3**			36.1	131	09/05/2024	DBA
Phenol - BSD	EPA-8270	**82.1**	**2**		36.1	131	09/05/2024	DBA
Aniline - BS	EPA-8270	**49.4**			20	150	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 SMOKEY POINT BLVD , #808
Arlington, WA 98223

DATE: 9/6/2024
ALS SDG#: EV24090007
WDOE ACCREDITATION: C601

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Aniline - BSD	EPA-8270	**52.3**	**6**		20	150	09/05/2024	DBA
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**85.8**			20	150	09/05/2024	DBA
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**82.6**	**4**		20	150	09/05/2024	DBA
2-Chlorophenol - BS	EPA-8270	**87.9**			59.9	111	09/05/2024	DBA
2-Chlorophenol - BSD	EPA-8270	**83.9**	**5**		59.9	111	09/05/2024	DBA
1,3-Dichlorobenzene - BS	EPA-8270	**79.9**			20	150	09/05/2024	DBA
1,3-Dichlorobenzene - BSD	EPA-8270	**73.2**	**9**		20	150	09/05/2024	DBA
1,4-Dichlorobenzene - BS	EPA-8270	**79.0**			44.3	122	09/05/2024	DBA
1,4-Dichlorobenzene - BSD	EPA-8270	**74.8**	**5**		44.3	122	09/05/2024	DBA
Benzyl Alcohol - BS	EPA-8270	**88.8**			20	150	09/05/2024	DBA
Benzyl Alcohol - BSD	EPA-8270	**86.9**	**2**		20	150	09/05/2024	DBA
1,2-Dichlorobenzene - BS	EPA-8270	**78.6**			20	150	09/05/2024	DBA
1,2-Dichlorobenzene - BSD	EPA-8270	**73.9**	**6**		20	150	09/05/2024	DBA
2-Methylphenol - BS	EPA-8270	**92.4**			20	150	09/05/2024	DBA
2-Methylphenol - BSD	EPA-8270	**89.7**	**3**		20	150	09/05/2024	DBA
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**81.2**			20	150	09/05/2024	DBA
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**78.2**	**4**		20	150	09/05/2024	DBA
3&4-Methylphenol - BS	EPA-8270	**90.2**			20	150	09/05/2024	DBA
3&4-Methylphenol - BSD	EPA-8270	**87.2**	**3**		20	150	09/05/2024	DBA
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**85.8**			31.6	134	09/05/2024	DBA
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**83.9**	**2**		31.6	134	09/05/2024	DBA
Hexachloroethane - BS	EPA-8270	**87.9**			20	150	09/05/2024	DBA
Hexachloroethane - BSD	EPA-8270	**82.5**	**6**		20	150	09/05/2024	DBA
Nitrobenzene - BS	EPA-8270	**94.1**			20	150	09/05/2024	DBA
Nitrobenzene - BSD	EPA-8270	**92.9**	**1**		20	150	09/05/2024	DBA
Isophorone - BS	EPA-8270	**84.2**			20	150	09/05/2024	DBA
Isophorone - BSD	EPA-8270	**83.1**	**1**		20	150	09/05/2024	DBA
2-Nitrophenol - BS	EPA-8270	**90.8**			20	150	09/05/2024	DBA
2-Nitrophenol - BSD	EPA-8270	**90.1**	**1**		20	150	09/05/2024	DBA
2,4-Dimethylphenol - BS	EPA-8270	**167**		LCS03	20	150	09/05/2024	DBA
2,4-Dimethylphenol - BSD	EPA-8270	**161**	**3**	LCS03	20	150	09/05/2024	DBA
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**93.4**			20	150	09/05/2024	DBA
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**91.4**	**2**		20	150	09/05/2024	DBA
2,4-Dichlorophenol - BS	EPA-8270	**97.0**			20	150	09/05/2024	DBA
2,4-Dichlorophenol - BSD	EPA-8270	**93.3**	**4**		20	150	09/05/2024	DBA
1,2,4-Trichlorobenzene - BS	EPA-8270	**86.7**			44.6	122	09/05/2024	DBA
1,2,4-Trichlorobenzene - BSD	EPA-8270	**83.3**	**4**		44.6	122	09/05/2024	DBA
Naphthalene - BS	EPA-8270	**86.2**			20	150	09/05/2024	DBA
Naphthalene - BSD	EPA-8270	**83.4**	**3**		20	150	09/05/2024	DBA
4-Chloroaniline - BS	EPA-8270	**41.6**			20	150	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 SMOKEY POINT BLVD , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/6/2024
ALS SDG#: EV24090007
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Chloroaniline - BSD	EPA-8270	**38.0**	**0**		20	150	09/05/2024	DBA
Hexachlorobutadiene - BS	EPA-8270	**93.3**			20	150	09/05/2024	DBA
Hexachlorobutadiene - BSD	EPA-8270	**88.1**	**6**		20	150	09/05/2024	DBA
4-Chloro-3-Methylphenol - BS	EPA-8270	**95.5**			49.2	135	09/05/2024	DBA
4-Chloro-3-Methylphenol - BSD	EPA-8270	**92.2**	**3**		49.2	135	09/05/2024	DBA
2-Methylnaphthalene - BS	EPA-8270	**88.7**			20	150	09/05/2024	DBA
2-Methylnaphthalene - BSD	EPA-8270	**84.9**	**4**		20	150	09/05/2024	DBA
1-Methylnaphthalene - BS	EPA-8270	**86.3**			20	150	09/05/2024	DBA
1-Methylnaphthalene - BSD	EPA-8270	**84.4**	**2**		20	150	09/05/2024	DBA
Hexachlorocyclopentadiene - BS	EPA-8270	**431**		LCS03	20	150	09/05/2024	DBA
Hexachlorocyclopentadiene - BSD	EPA-8270	**429**	**0**	LCS03	20	150	09/05/2024	DBA
2,4,6-Trichlorophenol - BS	EPA-8270	**90.3**			20	150	09/05/2024	DBA
2,4,6-Trichlorophenol - BSD	EPA-8270	**88.3**	**2**		20	150	09/05/2024	DBA
2,4,5-Trichlorophenol - BS	EPA-8270	**90.0**			20	150	09/05/2024	DBA
2,4,5-Trichlorophenol - BSD	EPA-8270	**85.3**	**5**		20	150	09/05/2024	DBA
2-Chloronaphthalene - BS	EPA-8270	**91.2**			20	150	09/05/2024	DBA
2-Chloronaphthalene - BSD	EPA-8270	**87.1**	**5**		20	150	09/05/2024	DBA
2-Nitroaniline - BS	EPA-8270	**87.8**			20	150	09/05/2024	DBA
2-Nitroaniline - BSD	EPA-8270	**86.7**	**1**		20	150	09/05/2024	DBA
Acenaphthylene - BS	EPA-8270	**104**			20	150	09/05/2024	DBA
Acenaphthylene - BSD	EPA-8270	**99.6**	**4**		20	150	09/05/2024	DBA
Dimethylphthalate - BS	EPA-8270	**96.6**			20	150	09/05/2024	DBA
Dimethylphthalate - BSD	EPA-8270	**92.9**	**4**		20	150	09/05/2024	DBA
2,6-Dinitrotoluene - BS	EPA-8270	**95.4**			20	150	09/05/2024	DBA
2,6-Dinitrotoluene - BSD	EPA-8270	**91.0**	**5**		20	150	09/05/2024	DBA
Acenaphthene - BS	EPA-8270	**89.8**			49.3	117	09/05/2024	DBA
Acenaphthene - BSD	EPA-8270	**86.7**	**4**		49.3	117	09/05/2024	DBA
3-Nitroaniline - BS	EPA-8270	**58.9**			20	150	09/05/2024	DBA
3-Nitroaniline - BSD	EPA-8270	**59.9**	**2**		20	150	09/05/2024	DBA
2,4-Dinitrophenol - BS	EPA-8270	**91.4**			20	150	09/05/2024	DBA
2,4-Dinitrophenol - BSD	EPA-8270	**96.0**	**5**		20	150	09/05/2024	DBA
4-Nitrophenol - BS	EPA-8270	**76.9**			29.8	137	09/05/2024	DBA
4-Nitrophenol - BSD	EPA-8270	**81.6**	**6**		29.8	137	09/05/2024	DBA
Dibenzofuran - BS	EPA-8270	**87.0**			20	150	09/05/2024	DBA
Dibenzofuran - BSD	EPA-8270	**84.2**	**3**		20	150	09/05/2024	DBA
2,4-Dinitrotoluene - BS	EPA-8270	**89.1**			55.3	130	09/05/2024	DBA
2,4-Dinitrotoluene - BSD	EPA-8270	**86.1**	**3**		55.3	130	09/05/2024	DBA
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**90.5**			20	150	09/05/2024	DBA
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**87.5**	**3**		20	150	09/05/2024	DBA
Diethylphthalate - BS	EPA-8270	**99.3**			20	150	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 SMOKEY POINT BLVD , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/6/2024
ALS SDG#: EV24090007
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate - BSD	EPA-8270	**96.0**	**3**		20	150	09/05/2024	DBA
Fluorene - BS	EPA-8270	**94.1**			20	150	09/05/2024	DBA
Fluorene - BSD	EPA-8270	**89.3**	**5**		20	150	09/05/2024	DBA
4-Chlorophenyl-Phenylether - BS	EPA-8270	**97.8**			20	150	09/05/2024	DBA
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**92.4**	**6**		20	150	09/05/2024	DBA
4-Nitroaniline - BS	EPA-8270	**72.3**			20	150	09/05/2024	DBA
4-Nitroaniline - BSD	EPA-8270	**74.3**	**3**		20	150	09/05/2024	DBA
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**98.5**			20	150	09/05/2024	DBA
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**99.0**	**0**		20	150	09/05/2024	DBA
Azobenzene - BS	EPA-8270	**97.0**			20	150	09/05/2024	DBA
Azobenzene - BSD	EPA-8270	**93.9**	**3**		20	150	09/05/2024	DBA
4-Bromophenyl-Phenylether - BS	EPA-8270	**106**			20	150	09/05/2024	DBA
4-Bromophenyl-Phenylether - BSD	EPA-8270	**104**	**2**		20	150	09/05/2024	DBA
Hexachlorobenzene - BS	EPA-8270	**101**			20	150	09/05/2024	DBA
Hexachlorobenzene - BSD	EPA-8270	**97.2**	**4**		20	150	09/05/2024	DBA
Pentachlorophenol - BS	EPA-8270	**87.8**			41.3	113	09/05/2024	DBA
Pentachlorophenol - BSD	EPA-8270	**87.8**	**0**		41.3	113	09/05/2024	DBA
Phenanthrene - BS	EPA-8270	**91.4**			20	150	09/05/2024	DBA
Phenanthrene - BSD	EPA-8270	**89.8**	**2**		20	150	09/05/2024	DBA
Anthracene - BS	EPA-8270	**98.8**			20	150	09/05/2024	DBA
Anthracene - BSD	EPA-8270	**96.4**	**2**		20	150	09/05/2024	DBA
Carbazole - BS	EPA-8270	**88.4**			20	150	09/05/2024	DBA
Carbazole - BSD	EPA-8270	**89.9**	**2**		20	150	09/05/2024	DBA
Di-N-Butylphthalate - BS	EPA-8270	**99.5**			20	150	09/05/2024	DBA
Di-N-Butylphthalate - BSD	EPA-8270	**98.3**	**1**		20	150	09/05/2024	DBA
Fluoranthene - BS	EPA-8270	**102**			20	150	09/05/2024	DBA
Fluoranthene - BSD	EPA-8270	**101**	**2**		20	150	09/05/2024	DBA
Pyrene - BS	EPA-8270	**102**			57.4	145	09/05/2024	DBA
Pyrene - BSD	EPA-8270	**93.0**	**9**		57.4	145	09/05/2024	DBA
Butylbenzylphthalate - BS	EPA-8270	**96.4**			20	150	09/05/2024	DBA
Butylbenzylphthalate - BSD	EPA-8270	**92.2**	**4**		20	150	09/05/2024	DBA
Benzo[A]Anthracene - BS	EPA-8270	**98.7**			20	150	09/05/2024	DBA
Benzo[A]Anthracene - BSD	EPA-8270	**98.6**	**0**		20	150	09/05/2024	DBA
Chrysene - BS	EPA-8270	**93.0**			20	150	09/05/2024	DBA
Chrysene - BSD	EPA-8270	**90.8**	**2**		20	150	09/05/2024	DBA
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**96.4**			20	150	09/05/2024	DBA
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**92.9**	**4**		20	150	09/05/2024	DBA
Di-N-Octylphthalate - BS	EPA-8270	**101**			20	150	09/05/2024	DBA
Di-N-Octylphthalate - BSD	EPA-8270	**103**	**2**		20	150	09/05/2024	DBA
Benzo[B]Fluoranthene - BS	EPA-8270	**89.9**			20	150	09/05/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS SDG#: WDOE ACCREDITATION:	9/6/2024 EV24090007 C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Benzo[B]Fluoranthene - BSD	EPA-8270	**90.2**	**0**		20	150	09/05/2024	DBA
Benzo[K]Fluoranthene - BS	EPA-8270	**103**			20	150	09/05/2024	DBA
Benzo[K]Fluoranthene - BSD	EPA-8270	**97.8**	**5**		20	150	09/05/2024	DBA
Benzo[A]Pyrene - BS	EPA-8270	**87.7**			20	150	09/05/2024	DBA
Benzo[A]Pyrene - BSD	EPA-8270	**86.3**	**2**		20	150	09/05/2024	DBA
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**83.4**			20	150	09/05/2024	DBA
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**80.7**	**3**		20	150	09/05/2024	DBA
Dibenz[A,H]Anthracene - BS	EPA-8270	**86.2**			20	150	09/05/2024	DBA
Dibenz[A,H]Anthracene - BSD	EPA-8270	**85.4**	**1**		20	150	09/05/2024	DBA
Benzo[G,H,I]Perylene - BS	EPA-8270	**95.6**			20	150	09/05/2024	DBA
Benzo[G,H,I]Perylene - BSD	EPA-8270	**92.5**	**3**		20	150	09/05/2024	DBA

LCS03 - The LCS and/or LCSD recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is required for this analyte.

ALS Test Batch ID: 217182 - Soil by EPA-8082

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - BS	EPA-8082	**88.3**			50	150	09/06/2024	DBA
PCB-1016 - BSD	EPA-8082	**76.8**	**54**	SR1	50	150	09/06/2024	DBA
PCB-1260 - BS	EPA-8082	**91.5**			50	150	09/06/2024	DBA
PCB-1260 - BSD	EPA-8082	**81.7**	**56**	SR1	50	150	09/06/2024	DBA

SR1 - RPD outside of control limits.

ALS Test Batch ID: R476553 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**106**			81.8	117	09/06/2024	RAL
Mercury - BSD	EPA-7471	**106**	**0**		81.8	117	09/06/2024	RAL

ALS Test Batch ID: 217226 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Antimony - BS	EPA-6020	**97.5**			80	120	09/06/2024	EBS
Antimony - BSD	EPA-6020	**96.8**	**1**		80	120	09/06/2024	EBS
Arsenic - BS	EPA-6020	**101**			80	120	09/06/2024	EBS
Arsenic - BSD	EPA-6020	**98.3**	**3**		80	120	09/06/2024	EBS
Beryllium - BS	EPA-6020	**101**			80	120	09/06/2024	EBS
Beryllium - BSD	EPA-6020	**99.4**	**1**		80	120	09/06/2024	EBS
Cadmium - BS	EPA-6020	**103**			80	120	09/06/2024	EBS
Cadmium - BSD	EPA-6020	**102**	**1**		80	120	09/06/2024	EBS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

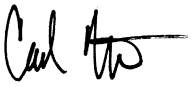
CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 SMOKEY POINT BLVD , #808 Arlington, WA 98223	DATE: ALS SDG#: WDOE ACCREDITATION:	9/6/2024 EV24090007 C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chromium - BS	EPA-6020	**96.6**			80	120	09/06/2024	EBS
Chromium - BSD	EPA-6020	**96.1**	**1**		80	120	09/06/2024	EBS
Copper - BS	EPA-6020	**106**			80	120	09/06/2024	EBS
Copper - BSD	EPA-6020	**104**	**1**		80	120	09/06/2024	EBS
Lead - BS	EPA-6020	**101**			80	120	09/06/2024	EBS
Lead - BSD	EPA-6020	**99.4**	**2**		80	120	09/06/2024	EBS
Nickel - BS	EPA-6020	**104**			80	120	09/06/2024	EBS
Nickel - BSD	EPA-6020	**102**	**2**		80	120	09/06/2024	EBS
Selenium - BS	EPA-6020	**101**			80	120	09/06/2024	EBS
Selenium - BSD	EPA-6020	**98.2**	**3**		80	120	09/06/2024	EBS
Silver - BS	EPA-6020	**104**			80	120	09/06/2024	EBS
Silver - BSD	EPA-6020	**103**	**0**		80	120	09/06/2024	EBS
Thallium - BS	EPA-6020	**101**			80	120	09/06/2024	EBS
Thallium - BSD	EPA-6020	**100**	**1**		80	120	09/06/2024	EBS
Zinc - BS	EPA-6020	**103**			80	119	09/06/2024	EBS
Zinc - BSD	EPA-6020	**101**	**2**		80	119	09/06/2024	EBS

APPROVED BY



Carl Nott
Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24090007

Date _____ Page _____ Of _____

PROJECT ID:	Port of Everett Fill Material
REPORT TO COMPANY:	Bayshore Const
PROJECT MANAGER:	Julie Eagan
ADDRESS:	16821 Smokey Pt Blvd #808 Arlington, WA 98223
PHONE:	425-268-9703 P.O. #: Marine Terminal
E-MAIL:	julie@bayshoreco.com
INVOICE TO COMPANY:	Same
ATTENTION:	
ADDRESS:	

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX w/SG clean-up	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify) Sb, As, Ba, Cd, Cr, Cu, Pb	OTHER (Specify) Ni, Se, Ag, Tl, Zn, Hg	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MLM	8/30/24	3:15p	S	1		X	X				X			X	X	X				X	X		
2.																							
3.																							
4.																							
5.																							
6.																							
7.																							
8.																							
9.																							
10.																							

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: _____
   Received By: _____
2. Relinquished By: Julie Eagan
   Received By: 9/3/24 11:43am

9/3/24 1103

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis

10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis

5 Standard | 3 | 1 | SAME DAY

OTHER:

Specify: _____

*Turnaround request less than standard may incur Rush Charges

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

SAMPLE RECEIVING CHECKLIST

Client: Bayshore Construction
Project: Port of Everett Fill material

ALS Job #: EV24090007
Login Date: 9/3/24
Login Time: 1103
Login By: AV

Type of Shipping Container:
- ☐ Cooler
- ☐ Box
- ☐ Other: Hand

Shipped Via:
- ☐ FedEx Ground
- ☐ FedEx Express
- ☐ UPS
- ☐ External Courier
- ☐ ALS Courier
- ☒ Hand Delivered

	Yes	No	N/A
Were custody seals on the outside of the shipping container?			✓
How Many? ____ Where? ____ Date: ____ Name: ____			
Was CoC filled out properly? (in ink, signed, dated, etc.)	✓		
Did all bottles have labels?	✓		
Did all bottle labels and tags agree with CoC?	✓		
Were samples received within hold time?	✓		
Did all bottles arrive in good condition?	✓		
Was sufficient amount of sample sent for tests requested?	✓		
Was correct preservation added to samples?	✓		
Subcontract test containers added to subcontract bin?			✓
Wetchem test containers marked with applicable tests?			✓
Short hold time test containers delivered to analysts?			✓
VOA vials checked for bubbles?			✓
Bubbles in sample number(s): ____			
5035A kits received?	✓		
Low kits: 1 High kits: ____			
5035A kits returned?			✓
Low kits: ____ High kits: ____			

Temperature upon receipt: 22.8 °C On ice? N Thermometer ID: 148

Other discrepancies:

Was client contacted? ____ Who was called? ____ By whom? ____ Date: ____
Outcome of call:

ALS Environmental – Everett
8620 Holly Dr. STE 100
Everett, WA 98012
(425) 356 - 2600

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Rob Greer
ALS Global
8620 Holly Drive
Everett, Washington 98208

Generated 9/4/2024 5:51:15 PM

JOB DESCRIPTION

Dioxin

JOB NUMBER

320-114556-1

Eurofins Sacramento
880 Riverside Parkway
West Sacramento CA 95605

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



Generated
9/4/2024 5:51:15 PM

Authorized for release by
Nathaniel Horner, Project Management Assistant I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 7
Isotope Dilution Summary 8
QC Association Summary 9
Lab Chronicle 10
Certification Summary 11
Method Summary 12
Sample Summary 13
Chain of Custody 14
Receipt Checklists 16

Definitions/Glossary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114556-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 320-114556-1 — Eurofins Sacramento

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 8/14/2024 9:20 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.1°C.

Dioxin
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114556-1

Client Sample ID: EV24080062-01 — Lab Sample ID: 320-114556-1

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114556-1

Client Sample ID: EV24080062-01
Date Collected: 08/07/24 13:30
Date Received: 08/14/24 09:20

Lab Sample ID: 320-114556-1
Matrix: Solid
Percent Solids: 93.9

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.1		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
2,3,7,8-TCDF	ND		1.1		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,7,8-PeCDD	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,7,8-PeCDF	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
2,3,4,7,8-PeCDF	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,4,7,8-HxCDD	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,6,7,8-HxCDD	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,7,8,9-HxCDD	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,4,7,8-HxCDF	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,6,7,8-HxCDF	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,7,8,9-HxCDF	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
2,3,4,6,7,8-HxCDF	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,4,6,7,8-HpCDD	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,4,6,7,8-HpCDF	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
1,2,3,4,7,8,9-HpCDF	ND		5.3		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
OCDD	ND		11		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1
OCDF	ND		11		pg/g	☼	08/22/24 10:54	09/01/24 15:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*67*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-2,3,7,8-TCDF	*71*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,7,8-PeCDD	*59*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,7,8-PeCDF	*62*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-2,3,4,7,8-PeCDF	*59*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,4,7,8-HxCDD	*63*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,6,7,8-HxCDD	*70*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,4,7,8-HxCDF	*70*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-2,3,4,6,7,8-HxCDF	*70*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,6,7,8-HxCDF	*75*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,7,8,9-HxCDF	*69*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*61*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*63*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*62*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-OCDD	*64*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*
13C-OCDF	*61*		*40 - 135*	*08/22/24 10:54*	*09/01/24 15:57*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	**6.1**		0.1		%			08/20/24 13:20	1
Percent Solids (ASTM D 2216)	**93.9**		0.1		%			08/20/24 13:20	1

Isotope Dilution Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114556-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)
320-114556-1	EV24080062-01	67	71	59	62	59	63	70	70

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		13CHxCF	HxDF	HxCF	HpCDD	HpCDF	HpCDF2	OCDD	OCDF
Lab Sample ID	Client Sample ID	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)
320-114556-1	EV24080062-01	70	75	69	61	63	62	64	61

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

QC Association Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114556-1

Specialty Organics

Prep Batch: 793380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-114556-1	EV24080062-01	Total/NA	Solid	8290	

Analysis Batch: 796081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-114556-1	EV24080062-01	Total/NA	Solid	8290A	793380

General Chemistry

Analysis Batch: 792883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-114556-1	EV24080062-01	Total/NA	Solid	D 2216	

Lab Chronicle

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114556-1

Client Sample ID: EV24080062-01
Date Collected: 08/07/24 13:30
Date Received: 08/14/24 09:20

Lab Sample ID: 320-114556-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			792883	08/20/24 13:20	IS	EET SAC

Client Sample ID: EV24080062-01
Date Collected: 08/07/24 13:30
Date Received: 08/14/24 09:20

Lab Sample ID: 320-114556-1
Matrix: Solid
Percent Solids: 93.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.04 g	20.0 uL	793380	08/22/24 10:54	BLR	EET SAC
Total/NA	Analysis	8290A		1	1 Sample	1 Sample	796081	09/01/24 15:57	JBC	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114556-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids

Method Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114556-1

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
8290	Soxhlet Extraction of Dioxins and Furans	SW846	EET SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114556-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-114556-1	EV24080062-01	Solid	08/07/24 13:30	08/14/24 09:20

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

Date 8/13/24 Page 1 Of 1

PROJECT ID	EV24080062
REPORT TO COMPANY	ALS Environmental
PROJECT MANAGER	Rob Greer
ADDRESS	8620 Holly Drive #100
	Everett WA 98208
PHONE	(425) 356-2600 PO # 32-EV24080062
E-MAIL	rob.greer@alsglobal.com
INVOICE TO COMPANY	
ATTENTION	Same
ADDRESS	

ANALYSIS REQUESTED

OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	Dioxin/Furan	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EV24080062-01	8/7/24	1330	S																X	1	
2.																						
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

320-114556 Chain of Custody

SPECIAL INSTRUCTIONS Please email results by 9/12/24. Thank you.

SIGNATURES (Name, Company, Date, Time):

1 Relinquished By: Shawn Robinson ALS 8/13/24 1218

Received By: [signature] ECDSM 8/14/24 0426

2. Relinquished By:

Received By: 2.1C

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis

10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis

5 Standard | 3 | 1 | SAME DAY

OTHER:

Specify:

*Turnaround request less than standard may incur Rush Charges

eurofins | Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Loc 320
114556

Tracking # 7779 5393 6276

Job _____ _____

(SO) PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC

Therm. ID CF2 Corr. Factor (+ / -) _____ °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal _____

Cooler ID _____

Temp Observed 2.1 °C Corrected 2.1 °C

From: Temp Blank ☐ Sample ☑

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials M Date 8/14/24

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☑	☐
Samples w/o discrepancies?	☐	☑	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials M Date 8/14/24

Notes:
COC 0V240800062-01
Container C240800062-1

Trizma Lot #(s): _____

Ammonium Acetate Lot #(s). _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑ NA
Samples received within hold time?	☑	☐	☐
Log Release checked in TALS?	☑	☐	☐

Initials M Date 8/14/24

Login Sample Receipt Checklist

Client: ALS Global

Job Number: 320-114556-1

Login Number: 114556
List Number: 1
Creator: Soto-Hernandez, Flor N

List Source: Eurofins Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	REFER TO SSRN
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	N/A	
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	N/A	
Samples are received within Holding Time (excluding tests with immediate HTs)	N/A	
Sample containers have legible labels.	N/A	
Containers are not broken or leaking.	N/A	
Sample collection date/times are provided.	N/A	
Appropriate sample containers are used.	N/A	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

September 26, 2024

Ms. Julie Eagan
Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

Dear Ms. Eagan,

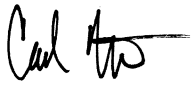
On August 27th, 1 sample was received by our laboratory and assigned our laboratory project number EV24080187. The project was identified as your Port of Everett Fill Material . The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group



Carl Nott
Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/26/2024 EV24080187 EV24080187-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	08/27/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/26/2024 4:30:00 PM
CLIENT SAMPLE ID	Cal Portland	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	08/27/2024	MNC
TPH-Diesel Range	NWTPH-DX w/ SGA	U	25	1	MG/KG	08/30/2024	DHM
TPH-Oil Range	NWTPH-DX w/ SGA	U	50	1	MG/KG	08/30/2024	DHM
Dichlorodifluoromethane	EPA-8260	U	0.00031	1	MG/KG	08/27/2024	DLC
Chloromethane	EPA-8260	U	0.00028	1	MG/KG	08/27/2024	DLC
Vinyl Chloride	EPA-8260	U	8.20E-06	1	MG/KG	08/27/2024	DLC
Bromomethane	EPA-8260	U	0.00032	1	MG/KG	08/27/2024	DLC
Chloroethane	EPA-8260	U	0.00024	1	MG/KG	08/27/2024	DLC
Carbon Tetrachloride	EPA-8260	U	0.00016	1	MG/KG	08/27/2024	DLC
Trichlorofluoromethane	EPA-8260	U	0.00020	1	MG/KG	08/27/2024	DLC
Carbon Disulfide	EPA-8260	U	0.00021	1	MG/KG	08/27/2024	DLC
Acetone	EPA-8260	U	0.050	1	MG/KG	08/27/2024	DLC
1,1-Dichloroethene	EPA-8260	U	0.00030	1	MG/KG	08/27/2024	DLC
Methylene Chloride	EPA-8260	U	0.0050	1	MG/KG	08/27/2024	DLC
Acrylonitrile	EPA-8260	U	0.00021	1	MG/KG	08/27/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.00031	1	MG/KG	08/27/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.00029	1	MG/KG	08/27/2024	DLC
1,1-Dichloroethane	EPA-8260	U	0.00016	1	MG/KG	08/27/2024	DLC
2-Butanone	EPA-8260	U	0.050	1	MG/KG	08/27/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.00018	1	MG/KG	08/27/2024	DLC
2,2-Dichloropropane	EPA-8260	U	0.00023	1	MG/KG	08/27/2024	DLC
Bromochloromethane	EPA-8260	U	0.00021	1	MG/KG	08/27/2024	DLC
Chloroform	EPA-8260	U	0.00029	1	MG/KG	08/27/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.00031	1	MG/KG	08/27/2024	DLC
1,1-Dichloropropene	EPA-8260	U	0.00026	1	MG/KG	08/27/2024	DLC
1,2-Dichloroethane	EPA-8260	U	9.00E-05	1	MG/KG	08/27/2024	DLC
Benzene	EPA-8260	U	0.00015	1	MG/KG	08/27/2024	DLC
Trichloroethene	EPA-8260	U	0.00017	1	MG/KG	08/27/2024	DLC
1,2-Dichloropropane	EPA-8260	U	9.60E-05	1	MG/KG	08/27/2024	DLC
Dibromomethane	EPA-8260	U	0.00031	1	MG/KG	08/27/2024	DLC
Bromodichloromethane	EPA-8260	U	9.40E-05	1	MG/KG	08/27/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.00021	1	MG/KG	08/27/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.00037	1	MG/KG	08/27/2024	DLC
Toluene	EPA-8260	U	9.00E-05	1	MG/KG	08/27/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.00013	1	MG/KG	08/27/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	7.80E-05	1	MG/KG	08/27/2024	DLC
2-Hexanone	EPA-8260	U	0.00053	1	MG/KG	08/27/2024	DLC
1,3-Dichloropropane	EPA-8260	U	5.20E-05	1	MG/KG	08/27/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/26/2024 EV24080187 EV24080187-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	08/27/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/26/2024 4:30:00 PM
CLIENT SAMPLE ID	Cal Portland	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.00020	1	MG/KG	08/27/2024	DLC
Dibromochloromethane	EPA-8260	U	4.60E-05	1	MG/KG	08/27/2024	DLC
1,2-Dibromoethane	EPA-8260	U	7.30E-05	1	MG/KG	08/27/2024	DLC
Chlorobenzene	EPA-8260	U	8.60E-05	1	MG/KG	08/27/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.00012	1	MG/KG	08/27/2024	DLC
Ethylbenzene	EPA-8260	U	0.00013	1	MG/KG	08/27/2024	DLC
m,p-Xylene	EPA-8260	U	0.00025	1	MG/KG	08/27/2024	DLC
Styrene	EPA-8260	U	0.00012	1	MG/KG	08/27/2024	DLC
o-Xylene	EPA-8260	U	0.00016	1	MG/KG	08/27/2024	DLC
Bromoform	EPA-8260	U	0.00011	1	MG/KG	08/27/2024	DLC
Isopropylbenzene	EPA-8260	U	0.00012	1	MG/KG	08/27/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.00022	1	MG/KG	08/27/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.60E-05	1	MG/KG	08/27/2024	DLC
Bromobenzene	EPA-8260	U	0.00014	1	MG/KG	08/27/2024	DLC
N-Propyl Benzene	EPA-8260	U	0.00012	1	MG/KG	08/27/2024	DLC
2-Chlorotoluene	EPA-8260	U	0.00016	1	MG/KG	08/27/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.00017	1	MG/KG	08/27/2024	DLC
4-Chlorotoluene	EPA-8260	U	0.00011	1	MG/KG	08/27/2024	DLC
T-Butyl Benzene	EPA-8260	U	0.00029	1	MG/KG	08/27/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.00016	1	MG/KG	08/27/2024	DLC
S-Butyl Benzene	EPA-8260	U	0.00018	1	MG/KG	08/27/2024	DLC
P-Isopropyltoluene	EPA-8260	U	0.00015	1	MG/KG	08/27/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	9.90E-05	1	MG/KG	08/27/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.00012	1	MG/KG	08/27/2024	DLC
N-Butylbenzene	EPA-8260	U	0.00023	1	MG/KG	08/27/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.00011	1	MG/KG	08/27/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	6.90E-05	1	MG/KG	08/27/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.00018	1	MG/KG	08/27/2024	DLC
Hexachlorobutadiene	EPA-8260	U	0.00016	1	MG/KG	08/27/2024	DLC
Naphthalene	EPA-8260	U	0.00012	1	MG/KG	08/27/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	9.00E-05	1	MG/KG	08/27/2024	DLC
Naphthalene	EPA-8270 SIM	U	0.00040	1	MG/KG	08/29/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	U	0.00049	1	MG/KG	08/29/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	U	0.00040	1	MG/KG	08/29/2024	DBA
Acenaphthylene	EPA-8270 SIM	U	0.00036	1	MG/KG	08/29/2024	DBA
Acenaphthene	EPA-8270 SIM	U	0.00033	1	MG/KG	08/29/2024	DBA
Fluorene	EPA-8270 SIM	U	0.00048	1	MG/KG	08/29/2024	DBA
Phenanthrene	EPA-8270 SIM	U	0.00064	1	MG/KG	08/29/2024	DBA
Anthracene	EPA-8270 SIM	U	0.00054	1	MG/KG	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/26/2024 EV24080187 EV24080187-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	08/27/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/26/2024 4:30:00 PM
CLIENT SAMPLE ID	Cal Portland	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Fluoranthene	EPA-8270 SIM	U	0.00052	1	MG/KG	08/29/2024	DBA
Pyrene	EPA-8270 SIM	U	0.00056	1	MG/KG	08/29/2024	DBA
Benzo[A]Anthracene	EPA-8270 SIM	U	0.00041	1	MG/KG	08/29/2024	DBA
Chrysene	EPA-8270 SIM	U	0.00056	1	MG/KG	08/29/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.00055	1	MG/KG	08/29/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.00045	1	MG/KG	08/29/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	U	0.00044	1	MG/KG	08/29/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.00053	1	MG/KG	08/29/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.00062	1	MG/KG	08/29/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.00071	1	MG/KG	08/29/2024	DBA
Pyridine	EPA-8270	U	0.041	1	MG/KG	08/29/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	0.025	1	MG/KG	08/29/2024	DBA
Phenol	EPA-8270	U	0.037	1	MG/KG	08/29/2024	DBA
Aniline	EPA-8270	U	0.043	1	MG/KG	08/29/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.090	1	MG/KG	08/29/2024	DBA
2-Chlorophenol	EPA-8270	U	0.091	1	MG/KG	08/29/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	0.025	1	MG/KG	08/29/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	0.022	1	MG/KG	08/29/2024	DBA
Benzyl Alcohol	EPA-8270	U	0.048	1	MG/KG	08/29/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	0.022	1	MG/KG	08/29/2024	DBA
2-Methylphenol	EPA-8270	U	0.032	1	MG/KG	08/29/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.12	1	MG/KG	08/29/2024	DBA
3&4-Methylphenol	EPA-8270	U	0.040	1	MG/KG	08/29/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.087	1	MG/KG	08/29/2024	DBA
Hexachloroethane	EPA-8270	U	0.019	1	MG/KG	08/29/2024	DBA
Nitrobenzene	EPA-8270	U	0.018	1	MG/KG	08/29/2024	DBA
Isophorone	EPA-8270	U	0.066	1	MG/KG	08/29/2024	DBA
2-Nitrophenol	EPA-8270	U	0.029	1	MG/KG	08/29/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	0.060	1	MG/KG	08/29/2024	DBA
Benzoic Acid	EPA-8270	U	0.67	1	MG/KG	08/29/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.11	1	MG/KG	08/29/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	0.23	1	MG/KG	08/29/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	0.066	1	MG/KG	08/29/2024	DBA
Naphthalene	EPA-8270	U	0.025	1	MG/KG	08/29/2024	DBA
4-Chloroaniline	EPA-8270	U	0.53	1	MG/KG	08/29/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	0.17	1	MG/KG	08/29/2024	DBA
Hexachlorobutadiene	EPA-8270	U	0.12	1	MG/KG	08/29/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	0.30	1	MG/KG	08/29/2024	DBA
2-Methylnaphthalene	EPA-8270	U	0.14	1	MG/KG	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/26/2024 EV24080187 EV24080187-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	08/27/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/26/2024 4:30:00 PM
CLIENT SAMPLE ID	Cal Portland	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1-Methylnaphthalene	EPA-8270	U	0.17	1	MG/KG	08/29/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	0.023	1	MG/KG	08/29/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	0.037	1	MG/KG	08/29/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	0.037	1	MG/KG	08/29/2024	DBA
2-Chloronaphthalene	EPA-8270	U	0.030	1	MG/KG	08/29/2024	DBA
2-Nitroaniline	EPA-8270	U	0.018	1	MG/KG	08/29/2024	DBA
Acenaphthylene	EPA-8270	U	0.024	1	MG/KG	08/29/2024	DBA
Dimethylphthalate	EPA-8270	U	0.040	1	MG/KG	08/29/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	0.035	1	MG/KG	08/29/2024	DBA
Acenaphthene	EPA-8270	U	0.027	1	MG/KG	08/29/2024	DBA
3-Nitroaniline	EPA-8270	U	0.54	1	MG/KG	08/29/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	0.049	1	MG/KG	08/29/2024	DBA
4-Nitrophenol	EPA-8270	U	0.051	1	MG/KG	08/29/2024	DBA
Dibenzofuran	EPA-8270	U	0.030	1	MG/KG	08/29/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	0.020	1	MG/KG	08/29/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.047	1	MG/KG	08/29/2024	DBA
Diethylphthalate	EPA-8270	U	0.039	1	MG/KG	08/29/2024	DBA
Fluorene	EPA-8270	U	0.033	1	MG/KG	08/29/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	0.039	1	MG/KG	08/29/2024	DBA
4-Nitroaniline	EPA-8270	U	0.12	1	MG/KG	08/29/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.027	1	MG/KG	08/29/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	0.032	1	MG/KG	08/29/2024	DBA
Azobenzene	EPA-8270	U	0.041	1	MG/KG	08/29/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	0.034	1	MG/KG	08/29/2024	DBA
Hexachlorobenzene	EPA-8270	U	0.034	1	MG/KG	08/29/2024	DBA
Pentachlorophenol	EPA-8270	U	0.14	1	MG/KG	08/29/2024	DBA
Phenanthrene	EPA-8270	U	0.024	1	MG/KG	08/29/2024	DBA
Anthracene	EPA-8270	U	0.022	1	MG/KG	08/29/2024	DBA
Carbazole	EPA-8270	U	0.10	1	MG/KG	08/29/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	0.032	1	MG/KG	08/29/2024	DBA
Fluoranthene	EPA-8270	U	0.028	1	MG/KG	08/29/2024	DBA
Pyrene	EPA-8270	U	0.028	1	MG/KG	08/29/2024	DBA
Butylbenzylphthalate	EPA-8270	U	0.021	1	MG/KG	08/29/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	0.16	1	MG/KG	08/29/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	0.024	1	MG/KG	08/29/2024	DBA
Chrysene	EPA-8270	U	0.029	1	MG/KG	08/29/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.021	1	MG/KG	08/29/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	0.020	1	MG/KG	08/29/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	0.021	1	MG/KG	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/26/2024 EV24080187 EV24080187-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	08/27/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/26/2024 4:30:00 PM
CLIENT SAMPLE ID	Cal Portland	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene	EPA-8270	U	0.039	1	MG/KG	08/29/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	0.018	1	MG/KG	08/29/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.023	1	MG/KG	08/29/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	0.021	1	MG/KG	08/29/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	0.032	1	MG/KG	08/29/2024	DBA
PCB-1016	EPA-8082	U	0.00081	1	MG/KG	08/30/2024	DBA
PCB-1221	EPA-8082	U	0.00081	1	MG/KG	08/30/2024	DBA
PCB-1232	EPA-8082	U	0.00081	1	MG/KG	08/30/2024	DBA
PCB-1242	EPA-8082	U	0.00081	1	MG/KG	08/30/2024	DBA
PCB-1248	EPA-8082	U	0.00081	1	MG/KG	08/30/2024	DBA
PCB-1254	EPA-8082	U	0.00081	1	MG/KG	08/30/2024	DBA
PCB-1260	EPA-8082	U	0.00081	1	MG/KG	08/30/2024	DBA
PCB-1268	EPA-8082	U	0.00081	1	MG/KG	08/30/2024	DBA
Mercury	EPA-7471	U	0.020	1	MG/KG	09/03/2024	RAL
Antimony	EPA-6020	U	0.10	1	MG/KG	08/28/2024	EBS
Arsenic	EPA-6020	**1.8**	0.20	1	MG/KG	08/28/2024	EBS
Beryllium	EPA-6020	**0.14**	0.10	1	MG/KG	08/28/2024	EBS
Cadmium	EPA-6020	U	0.10	1	MG/KG	08/28/2024	EBS
Chromium	EPA-6020	**14**	0.10	1	MG/KG	08/28/2024	EBS
Copper	EPA-6020	**13**	0.10	1	MG/KG	08/28/2024	EBS
Lead	EPA-6020	**1.6**	0.10	1	MG/KG	08/28/2024	EBS
Nickel	EPA-6020	**23**	0.10	1	MG/KG	08/28/2024	EBS
Selenium	EPA-6020	U	1.0	1	MG/KG	08/28/2024	EBS
Silver	EPA-6020	U	0.10	1	MG/KG	08/28/2024	EBS
Thallium	EPA-6020	U	0.50	1	MG/KG	08/28/2024	EBS
Zinc	EPA-6020	**25**	0.50	1	MG/KG	08/28/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**84.0**	08/27/2024	MNC
C25	NWTPH-DX w/ SGA	**85.8**	08/30/2024	DHM
1,2-Dichloroethane-d4	EPA-8260	**125**	08/27/2024	DLC
Toluene-d8	EPA-8260	**95.5**	08/27/2024	DLC
4-Bromofluorobenzene	EPA-8260	**105**	08/27/2024	DLC
Terphenyl-d14	EPA-8270 SIM	**83.9**	08/29/2024	DBA
2-Fluorophenol	EPA-8270	**126 SUR09**	08/29/2024	DBA
Phenol-d5	EPA-8270	**130**	08/29/2024	DBA
Nitrobenzene-d5	EPA-8270	**109**	08/29/2024	DBA
2-Fluorobiphenyl	EPA-8270	**119**	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE: ALS JOB#: ALS SAMPLE#:	9/26/2024 EV24080187 EV24080187-01
CLIENT CONTACT:	Julie Eagan	DATE RECEIVED:	08/27/2024
CLIENT PROJECT:	Port of Everett Fill Material	COLLECTION DATE:	8/26/2024 4:30:00 PM
CLIENT SAMPLE ID	Cal Portland	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
2,4,6-Tribromophenol	EPA-8270	**101**	08/29/2024	DBA
Terphenyl-d14	EPA-8270	**138 SUR09**	08/29/2024	DBA
TCMX	EPA-8082	**89.1**	08/30/2024	DBA
DCB	EPA-8082	**90.5**	08/30/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.
SUR09 - Surrogate outside of control limits with a high bias. Associated compounds non-detect. No corrective action taken.

Soil results reported on a dry-weight basis.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan

CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBG-082724S - Batch 216798 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	MG/KG	3.0	08/27/2024	MNC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082924S - Batch 216961 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	MG/KG	25	08/29/2024	DHM
TPH-Oil Range	NWTPH-DX	U	MG/KG	50	08/29/2024	DHM

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082724S - Batch 216857 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	MG/KG	0.00046	08/27/2024	DLC
Chloromethane	EPA-8260	U	MG/KG	0.00042	08/27/2024	DLC
Vinyl Chloride	EPA-8260	U	MG/KG	0.000012	08/27/2024	DLC
Bromomethane	EPA-8260	U	MG/KG	0.00048	08/27/2024	DLC
Chloroethane	EPA-8260	U	MG/KG	0.00035	08/27/2024	DLC
Carbon Tetrachloride	EPA-8260	U	MG/KG	0.00023	08/27/2024	DLC
Trichlorofluoromethane	EPA-8260	U	MG/KG	0.00029	08/27/2024	DLC
Carbon Disulfide	EPA-8260	U	MG/KG	0.00032	08/27/2024	DLC
Acetone	EPA-8260	U	MG/KG	0.050	08/27/2024	DLC
1,1-Dichloroethene	EPA-8260	U	MG/KG	0.00045	08/27/2024	DLC
Methylene Chloride	EPA-8260	U	MG/KG	0.0050	08/27/2024	DLC
Acrylonitrile	EPA-8260	U	MG/KG	0.00030	08/27/2024	DLC
Methyl T-Butyl Ether	EPA-8260	U	MG/KG	0.00047	08/27/2024	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	MG/KG	0.00042	08/27/2024	DLC
1,1-Dichloroethane	EPA-8260	U	MG/KG	0.00024	08/27/2024	DLC
2-Butanone	EPA-8260	U	MG/KG	0.050	08/27/2024	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	MG/KG	0.00027	08/27/2024	DLC
2,2-Dichloropropane	EPA-8260	U	MG/KG	0.00034	08/27/2024	DLC
Bromochloromethane	EPA-8260	U	MG/KG	0.00031	08/27/2024	DLC
Chloroform	EPA-8260	U	MG/KG	0.00044	08/27/2024	DLC
1,1,1-Trichloroethane	EPA-8260	U	MG/KG	0.00046	08/27/2024	DLC
1,1-Dichloropropene	EPA-8260	U	MG/KG	0.00038	08/27/2024	DLC
1,2-Dichloroethane	EPA-8260	U	MG/KG	0.00013	08/27/2024	DLC
Benzene	EPA-8260	U	MG/KG	0.00023	08/27/2024	DLC
Trichloroethene	EPA-8260	U	MG/KG	0.00025	08/27/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE:	9/26/2024
		ALS SDG#:	EV24080187
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY BLANK RESULTS

MB-082724S - Batch 216857 - Soil by EPA-8260

1,2-Dichloropropane	EPA-8260	U	MG/KG	0.00014	08/27/2024	DLC
Dibromomethane	EPA-8260	U	MG/KG	0.00046	08/27/2024	DLC
Bromodichloromethane	EPA-8260	U	MG/KG	0.00014	08/27/2024	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	MG/KG	0.00030	08/27/2024	DLC
4-Methyl-2-Pentanone	EPA-8260	U	MG/KG	0.00055	08/27/2024	DLC
Toluene	EPA-8260	U	MG/KG	0.00013	08/27/2024	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	MG/KG	0.00019	08/27/2024	DLC
1,1,2-Trichloroethane	EPA-8260	U	MG/KG	0.00012	08/27/2024	DLC
2-Hexanone	EPA-8260	U	MG/KG	0.00079	08/27/2024	DLC
1,3-Dichloropropane	EPA-8260	U	MG/KG	0.000077	08/27/2024	DLC
Tetrachloroethylene	EPA-8260	U	MG/KG	0.00029	08/27/2024	DLC
Dibromochloromethane	EPA-8260	U	MG/KG	0.000068	08/27/2024	DLC
1,2-Dibromoethane	EPA-8260	U	MG/KG	0.00011	08/27/2024	DLC
Chlorobenzene	EPA-8260	U	MG/KG	0.00013	08/27/2024	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	MG/KG	0.00018	08/27/2024	DLC
Ethylbenzene	EPA-8260	U	MG/KG	0.00019	08/27/2024	DLC
m,p-Xylene	EPA-8260	U	MG/KG	0.00037	08/27/2024	DLC
Styrene	EPA-8260	U	MG/KG	0.00018	08/27/2024	DLC
o-Xylene	EPA-8260	U	MG/KG	0.00024	08/27/2024	DLC
Bromoform	EPA-8260	U	MG/KG	0.00016	08/27/2024	DLC
Isopropylbenzene	EPA-8260	U	MG/KG	0.00017	08/27/2024	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	MG/KG	0.00032	08/27/2024	DLC
1,2,3-Trichloropropane	EPA-8260	U	MG/KG	0.000038	08/27/2024	DLC
Bromobenzene	EPA-8260	U	MG/KG	0.00021	08/27/2024	DLC
N-Propyl Benzene	EPA-8260	U	MG/KG	0.00018	08/27/2024	DLC
2-Chlorotoluene	EPA-8260	U	MG/KG	0.00024	08/27/2024	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	MG/KG	0.00025	08/27/2024	DLC
4-Chlorotoluene	EPA-8260	U	MG/KG	0.00017	08/27/2024	DLC
T-Butyl Benzene	EPA-8260	U	MG/KG	0.00043	08/27/2024	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	MG/KG	0.00024	08/27/2024	DLC
S-Butyl Benzene	EPA-8260	U	MG/KG	0.00026	08/27/2024	DLC
P-Isopropyltoluene	EPA-8260	U	MG/KG	0.00022	08/27/2024	DLC
1,3-Dichlorobenzene	EPA-8260	U	MG/KG	0.00015	08/27/2024	DLC
1,4-Dichlorobenzene	EPA-8260	U	MG/KG	0.00018	08/27/2024	DLC
N-Butylbenzene	EPA-8260	U	MG/KG	0.00034	08/27/2024	DLC
1,2-Dichlorobenzene	EPA-8260	U	MG/KG	0.00016	08/27/2024	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	MG/KG	0.00010	08/27/2024	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	MG/KG	0.00026	08/27/2024	DLC
Hexachlorobutadiene	EPA-8260	U	MG/KG	0.00024	08/27/2024	DLC
Naphthalene	EPA-8260	U	MG/KG	0.00018	08/27/2024	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	MG/KG	0.00013	08/27/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE: ALS SDG#: WDOE ACCREDITATION:	9/26/2024 EV24080187 C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY BLANK RESULTS

MB-082724S - Batch 216857 - Soil by EPA-8260

U - Analyte analyzed for but not detected at level above reporting limit.

MB2-082924S - Batch 216968 - Soil by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	MG/KG	0.00080	08/29/2024	DBA
2-Methylnaphthalene	EPA-8270 SIM	U	MG/KG	0.00097	08/29/2024	DBA
1-Methylnaphthalene	EPA-8270 SIM	U	MG/KG	0.00080	08/29/2024	DBA
Acenaphthylene	EPA-8270 SIM	U	MG/KG	0.00071	08/29/2024	DBA
Acenaphthene	EPA-8270 SIM	U	MG/KG	0.00066	08/29/2024	DBA
Fluorene	EPA-8270 SIM	U	MG/KG	0.00096	08/29/2024	DBA
Phenanthrene	EPA-8270 SIM	U	MG/KG	0.0013	08/29/2024	DBA
Anthracene	EPA-8270 SIM	U	MG/KG	0.0011	08/29/2024	DBA
Fluoranthene	EPA-8270 SIM	U	MG/KG	0.0010	08/29/2024	DBA
Pyrene	EPA-8270 SIM	U	MG/KG	0.0011	08/29/2024	DBA
Benzo[A]Anthracene	EPA-8270 SIM	U	MG/KG	0.00082	08/29/2024	DBA
Chrysene	EPA-8270 SIM	U	MG/KG	0.0011	08/29/2024	DBA
Benzo[B]Fluoranthene	EPA-8270 SIM	U	MG/KG	0.0011	08/29/2024	DBA
Benzo[K]Fluoranthene	EPA-8270 SIM	U	MG/KG	0.00090	08/29/2024	DBA
Benzo[A]Pyrene	EPA-8270 SIM	U	MG/KG	0.00089	08/29/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	MG/KG	0.0011	08/29/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	MG/KG	0.0012	08/29/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	MG/KG	0.0014	08/29/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

MB2-082924S - Batch 216965 - Soil by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	MG/KG	0.12	08/29/2024	DBA
N-Nitrosodimethylamine	EPA-8270	U	MG/KG	0.070	08/29/2024	DBA
Phenol	EPA-8270	U	MG/KG	0.050	08/29/2024	DBA
Aniline	EPA-8270	U	MG/KG	0.058	08/29/2024	DBA
Bis(2-Chloroethyl)Ether	EPA-8270	U	MG/KG	0.12	08/29/2024	DBA
2-Chlorophenol	EPA-8270	U	MG/KG	0.12	08/29/2024	DBA
1,3-Dichlorobenzene	EPA-8270	U	MG/KG	0.067	08/29/2024	DBA
1,4-Dichlorobenzene	EPA-8270	U	MG/KG	0.060	08/29/2024	DBA
Benzyl Alcohol	EPA-8270	U	MG/KG	0.064	08/29/2024	DBA
1,2-Dichlorobenzene	EPA-8270	U	MG/KG	0.066	08/29/2024	DBA
2-Methylphenol	EPA-8270	U	MG/KG	0.090	08/29/2024	DBA
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	MG/KG	0.16	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE:	9/26/2024
		ALS SDG#:	EV24080187
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY BLANK RESULTS

MB2-082924S - Batch 216965 - Soil by EPA-8270

3&4-Methylphenol	EPA-8270	U	MG/KG	0.097	08/29/2024	DBA
N-Nitroso-Di-N-Propylamine	EPA-8270	U	MG/KG	0.12	08/29/2024	DBA
Hexachloroethane	EPA-8270	U	MG/KG	0.082	08/29/2024	DBA
Nitrobenzene	EPA-8270	U	MG/KG	0.069	08/29/2024	DBA
Isophorone	EPA-8270	U	MG/KG	0.087	08/29/2024	DBA
2-Nitrophenol	EPA-8270	U	MG/KG	0.090	08/29/2024	DBA
2,4-Dimethylphenol	EPA-8270	U	MG/KG	0.080	08/29/2024	DBA
Benzoic Acid	EPA-8270	U	MG/KG	0.89	08/29/2024	DBA
Bis(2-Chloroethoxy)Methane	EPA-8270	U	MG/KG	0.15	08/29/2024	DBA
2,4-Dichlorophenol	EPA-8270	U	MG/KG	0.31	08/29/2024	DBA
1,2,4-Trichlorobenzene	EPA-8270	U	MG/KG	0.088	08/29/2024	DBA
Naphthalene	EPA-8270	U	MG/KG	0.079	08/29/2024	DBA
4-Chloroaniline	EPA-8270	U	MG/KG	0.71	08/29/2024	DBA
2,6-Dichlorophenol	EPA-8270	U	MG/KG	0.23	08/29/2024	DBA
Hexachlorobutadiene	EPA-8270	U	MG/KG	0.16	08/29/2024	DBA
4-Chloro-3-Methylphenol	EPA-8270	U	MG/KG	0.40	08/29/2024	DBA
2-Methylnaphthalene	EPA-8270	U	MG/KG	0.19	08/29/2024	DBA
1-Methylnaphthalene	EPA-8270	U	MG/KG	0.22	08/29/2024	DBA
Hexachlorocyclopentadiene	EPA-8270	U	MG/KG	0.087	08/29/2024	DBA
2,4,6-Trichlorophenol	EPA-8270	U	MG/KG	0.066	08/29/2024	DBA
2,4,5-Trichlorophenol	EPA-8270	U	MG/KG	0.079	08/29/2024	DBA
2-Chloronaphthalene	EPA-8270	U	MG/KG	0.078	08/29/2024	DBA
2-Nitroaniline	EPA-8270	U	MG/KG	0.081	08/29/2024	DBA
Acenaphthylene	EPA-8270	U	MG/KG	0.081	08/29/2024	DBA
Dimethylphthalate	EPA-8270	U	MG/KG	0.081	08/29/2024	DBA
2,6-Dinitrotoluene	EPA-8270	U	MG/KG	0.079	08/29/2024	DBA
Acenaphthene	EPA-8270	U	MG/KG	0.078	08/29/2024	DBA
3-Nitroaniline	EPA-8270	U	MG/KG	0.72	08/29/2024	DBA
2,4-Dinitrophenol	EPA-8270	U	MG/KG	0.089	08/29/2024	DBA
4-Nitrophenol	EPA-8270	U	MG/KG	0.086	08/29/2024	DBA
Dibenzofuran	EPA-8270	U	MG/KG	0.093	08/29/2024	DBA
2,4-Dinitrotoluene	EPA-8270	U	MG/KG	0.085	08/29/2024	DBA
2,3,4,6-Tetrachlorophenol	EPA-8270	U	MG/KG	0.065	08/29/2024	DBA
Diethylphthalate	EPA-8270	U	MG/KG	0.084	08/29/2024	DBA
Fluorene	EPA-8270	U	MG/KG	0.089	08/29/2024	DBA
4-Chlorophenyl-Phenylether	EPA-8270	U	MG/KG	0.095	08/29/2024	DBA
4-Nitroaniline	EPA-8270	U	MG/KG	0.15	08/29/2024	DBA
4,6-Dinitro-2-Methylphenol	EPA-8270	U	MG/KG	0.29	08/29/2024	DBA
N-Nitrosodiphenylamine	EPA-8270	U	MG/KG	0.50	08/29/2024	DBA
Azobenzene	EPA-8270	U	MG/KG	0.062	08/29/2024	DBA
4-Bromophenyl-Phenylether	EPA-8270	U	MG/KG	0.086	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB2-082924S - Batch 216965 - Soil by EPA-8270

Hexachlorobenzene	EPA-8270	U	MG/KG	0.099	08/29/2024	DBA
Pentachlorophenol	EPA-8270	U	MG/KG	0.18	08/29/2024	DBA
Phenanthrene	EPA-8270	U	MG/KG	0.099	08/29/2024	DBA
Anthracene	EPA-8270	U	MG/KG	0.084	08/29/2024	DBA
Carbazole	EPA-8270	U	MG/KG	0.14	08/29/2024	DBA
Di-N-Butylphthalate	EPA-8270	U	MG/KG	0.076	08/29/2024	DBA
Fluoranthene	EPA-8270	U	MG/KG	0.10	08/29/2024	DBA
Pyrene	EPA-8270	U	MG/KG	0.15	08/29/2024	DBA
Butylbenzylphthalate	EPA-8270	U	MG/KG	0.083	08/29/2024	DBA
3,3-Dichlorobenzidine	EPA-8270	U	MG/KG	0.21	08/29/2024	DBA
Benzo[A]Anthracene	EPA-8270	U	MG/KG	0.078	08/29/2024	DBA
Chrysene	EPA-8270	U	MG/KG	0.090	08/29/2024	DBA
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	MG/KG	0.10	08/29/2024	DBA
Di-N-Octylphthalate	EPA-8270	U	MG/KG	0.088	08/29/2024	DBA
Benzo[B]Fluoranthene	EPA-8270	U	MG/KG	0.084	08/29/2024	DBA
Benzo[K]Fluoranthene	EPA-8270	U	MG/KG	0.087	08/29/2024	DBA
Benzo[A]Pyrene	EPA-8270	U	MG/KG	0.053	08/29/2024	DBA
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	MG/KG	0.069	08/29/2024	DBA
Dibenz[A,H]Anthracene	EPA-8270	U	MG/KG	0.065	08/29/2024	DBA
Benzo[G,H,I]Perylene	EPA-8270	U	MG/KG	0.094	08/29/2024	DBA

			CONTROL LIMITS			
SURROGATE	METHOD	%REC	MIN	MAX	ANALYSIS DATE	ANALYSIS BY
2-Fluorophenol	EPA-8270	**141 SUR09**	**44**	**125**	08/29/2024	DBA
Terphenyl-d14	EPA-8270	**159 SUR09**	**48**	**138**	08/29/2024	DBA

SUR09 - Surrogate outside of control limits with a high bias. Associated compounds non-detect. No corrective action taken.

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082924S - Batch 216969 - Soil by EPA-8082

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	MG/KG	0.0012	08/30/2024	DBA
PCB-1221	EPA-8082	U	MG/KG	0.0012	08/30/2024	DBA
PCB-1232	EPA-8082	U	MG/KG	0.0012	08/30/2024	DBA
PCB-1242	EPA-8082	U	MG/KG	0.0012	08/30/2024	DBA
PCB-1248	EPA-8082	U	MG/KG	0.0012	08/30/2024	DBA
PCB-1254	EPA-8082	U	MG/KG	0.0012	08/30/2024	DBA
PCB-1260	EPA-8082	U	MG/KG	0.0012	08/30/2024	DBA
PCB-1268	EPA-8082	U	MG/KG	0.0012	08/30/2024	DBA

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan

CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-R476181 - Batch R476181 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	09/03/2024	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082824S - Batch 216841 - Soil by EPA-6020

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Antimony	EPA-6020	U	MG/KG	0.10	08/28/2024	EBS
Arsenic	EPA-6020	U	MG/KG	0.20	08/28/2024	EBS
Beryllium	EPA-6020	U	MG/KG	0.10	08/28/2024	EBS
Cadmium	EPA-6020	U	MG/KG	0.10	08/28/2024	EBS
Chromium	EPA-6020	U	MG/KG	0.10	08/28/2024	EBS
Copper	EPA-6020	U	MG/KG	0.10	08/28/2024	EBS
Lead	EPA-6020	U	MG/KG	0.10	08/28/2024	EBS
Nickel	EPA-6020	U	MG/KG	0.10	08/28/2024	EBS
Selenium	EPA-6020	U	MG/KG	1.0	08/28/2024	EBS
Silver	EPA-6020	U	MG/KG	0.10	08/28/2024	EBS
Thallium	EPA-6020	U	MG/KG	0.50	08/28/2024	EBS
Zinc	EPA-6020	U	MG/KG	0.88	08/28/2024	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223
CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 216798 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**91.8**			66.5	122.7	08/27/2024	MNC
TPH-Volatile Range - BSD	NWTPH-GX	**87.6**	**5**		66.5	122.7	08/27/2024	MNC

ALS Test Batch ID: 216961 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**99.0**			75.5	122.1	08/29/2024	DHM
TPH-Diesel Range - BSD	NWTPH-DX	**102**	**3**		75.5	122.1	08/29/2024	DHM

ALS Test Batch ID: 216857 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - BS	EPA-8260	**106**			50	150	08/27/2024	DLC
Dichlorodifluoromethane - BSD	EPA-8260	**95.6**	**10**		50	150	08/27/2024	DLC
Chloromethane - BS	EPA-8260	**98.6**			50	150	08/27/2024	DLC
Chloromethane - BSD	EPA-8260	**90.8**	**8**		50	150	08/27/2024	DLC
Vinyl Chloride - BS	EPA-8260	**105**			50	150	08/27/2024	DLC
Vinyl Chloride - BSD	EPA-8260	**95.6**	**9**		50	150	08/27/2024	DLC
Bromomethane - BS	EPA-8260	**82.6**			50	150	08/27/2024	DLC
Bromomethane - BSD	EPA-8260	**79.6**	**4**		50	150	08/27/2024	DLC
Chloroethane - BS	EPA-8260	**105**			50	150	08/27/2024	DLC
Chloroethane - BSD	EPA-8260	**96.3**	**9**		50	150	08/27/2024	DLC
Carbon Tetrachloride - BS	EPA-8260	**107**			50	150	08/27/2024	DLC
Carbon Tetrachloride - BSD	EPA-8260	**98.1**	**8**		50	150	08/27/2024	DLC
Trichlorofluoromethane - BS	EPA-8260	**105**			50	150	08/27/2024	DLC
Trichlorofluoromethane - BSD	EPA-8260	**95.5**	**9**		50	150	08/27/2024	DLC
Carbon Disulfide - BS	EPA-8260	**99.7**			50	150	08/27/2024	DLC
Carbon Disulfide - BSD	EPA-8260	**91.0**	**9**		50	150	08/27/2024	DLC
Acetone - BS	EPA-8260	**112**			50	150	08/27/2024	DLC
Acetone - BSD	EPA-8260	**89.6**	**22**		50	150	08/27/2024	DLC
1,1-Dichloroethene - BS	EPA-8260	**107**			70	130	08/27/2024	DLC
1,1-Dichloroethene - BSD	EPA-8260	**98.0**	**9**		70	130	08/27/2024	DLC
Methylene Chloride - BS	EPA-8260	**197**		LCS03	50	150	08/27/2024	DLC
Methylene Chloride - BSD	EPA-8260	**178**	**10**	LCS03	50	150	08/27/2024	DLC
Acrylonitrile - BS	EPA-8260	**109**			50	150	08/27/2024	DLC
Acrylonitrile - BSD	EPA-8260	**99.7**	**9**		50	150	08/27/2024	DLC
Methyl T-Butyl Ether - BS	EPA-8260	**114**			50	150	08/27/2024	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	**104**	**9**		50	150	08/27/2024	DLC
Trans-1,2-Dichloroethene - BS	EPA-8260	**101**			50	150	08/27/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan

CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Trans-1,2-Dichloroethene - BSD	EPA-8260	**93.3**	**8**		50	150	08/27/2024	DLC
1,1-Dichloroethane - BS	EPA-8260	**104**			50	150	08/27/2024	DLC
1,1-Dichloroethane - BSD	EPA-8260	**96.8**	**7**		50	150	08/27/2024	DLC
2-Butanone - BS	EPA-8260	**114**			50	150	08/27/2024	DLC
2-Butanone - BSD	EPA-8260	**95.5**	**18**		50	150	08/27/2024	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	**101**			50	150	08/27/2024	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	**93.7**	**7**		50	150	08/27/2024	DLC
2,2-Dichloropropane - BS	EPA-8260	**105**			50	150	08/27/2024	DLC
2,2-Dichloropropane - BSD	EPA-8260	**95.7**	**10**		50	150	08/27/2024	DLC
Bromochloromethane - BS	EPA-8260	**106**			50	150	08/27/2024	DLC
Bromochloromethane - BSD	EPA-8260	**97.3**	**8**		50	150	08/27/2024	DLC
Chloroform - BS	EPA-8260	**78.8**			50	150	08/27/2024	DLC
Chloroform - BSD	EPA-8260	**71.3**	**10**		50	150	08/27/2024	DLC
1,1,1-Trichloroethane - BS	EPA-8260	**104**			50	150	08/27/2024	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	**96.0**	**7**		50	150	08/27/2024	DLC
1,1-Dichloropropene - BS	EPA-8260	**106**			50	150	08/27/2024	DLC
1,1-Dichloropropene - BSD	EPA-8260	**96.8**	**10**		50	150	08/27/2024	DLC
1,2-Dichloroethane - BS	EPA-8260	**110**			50	150	08/27/2024	DLC
1,2-Dichloroethane - BSD	EPA-8260	**99.8**	**10**		50	150	08/27/2024	DLC
Benzene - BS	EPA-8260	**103**			75	138	08/27/2024	DLC
Benzene - BSD	EPA-8260	**94.4**	**8**		75	138	08/27/2024	DLC
Trichloroethene - BS	EPA-8260	**99.8**			75	136	08/27/2024	DLC
Trichloroethene - BSD	EPA-8260	**90.9**	**9**		75	136	08/27/2024	DLC
1,2-Dichloropropane - BS	EPA-8260	**108**			50	150	08/27/2024	DLC
1,2-Dichloropropane - BSD	EPA-8260	**99.7**	**8**		50	150	08/27/2024	DLC
Dibromomethane - BS	EPA-8260	**114**			50	150	08/27/2024	DLC
Dibromomethane - BSD	EPA-8260	**102**	**11**		50	150	08/27/2024	DLC
Bromodichloromethane - BS	EPA-8260	**108**			50	150	08/27/2024	DLC
Bromodichloromethane - BSD	EPA-8260	**97.5**	**10**		50	150	08/27/2024	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260	**114**			50	150	08/27/2024	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260	**103**	**10**		50	150	08/27/2024	DLC
4-Methyl-2-Pentanone - BS	EPA-8260	**122**			50	150	08/27/2024	DLC
4-Methyl-2-Pentanone - BSD	EPA-8260	**103**	**17**		50	150	08/27/2024	DLC
Toluene - BS	EPA-8260	**103**			71.6	122.1	08/27/2024	DLC
Toluene - BSD	EPA-8260	**93.2**	**10**		71.6	122.1	08/27/2024	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	**112**			50	150	08/27/2024	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	**102**	**10**		50	150	08/27/2024	DLC
1,1,2-Trichloroethane - BS	EPA-8260	**110**			50	150	08/27/2024	DLC
1,1,2-Trichloroethane - BSD	EPA-8260	**100**	**9**		50	150	08/27/2024	DLC
2-Hexanone - BS	EPA-8260	**116**			50	150	08/27/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
2-Hexanone - BSD	EPA-8260	**98.5**	**16**		50	150	08/27/2024	DLC
1,3-Dichloropropane - BS	EPA-8260	**111**			50	150	08/27/2024	DLC
1,3-Dichloropropane - BSD	EPA-8260	**99.7**	**10**		50	150	08/27/2024	DLC
Tetrachloroethylene - BS	EPA-8260	**101**			50	150	08/27/2024	DLC
Tetrachloroethylene - BSD	EPA-8260	**90.3**	**11**		50	150	08/27/2024	DLC
Dibromochloromethane - BS	EPA-8260	**112**			50	150	08/27/2024	DLC
Dibromochloromethane - BSD	EPA-8260	**102**	**9**		50	150	08/27/2024	DLC
1,2-Dibromoethane - BS	EPA-8260	**112**			50	150	08/27/2024	DLC
1,2-Dibromoethane - BSD	EPA-8260	**101**	**10**		50	150	08/27/2024	DLC
Chlorobenzene - BS	EPA-8260	**99.4**			79	128	08/27/2024	DLC
Chlorobenzene - BSD	EPA-8260	**91.0**	**9**		79	128	08/27/2024	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260	**105**			50	150	08/27/2024	DLC
1,1,1,2-Tetrachloroethane - BSD	EPA-8260	**96.6**	**8**		50	150	08/27/2024	DLC
Ethylbenzene - BS	EPA-8260	**100**			50	150	08/27/2024	DLC
Ethylbenzene - BSD	EPA-8260	**91.9**	**9**		50	150	08/27/2024	DLC
m,p-Xylene - BS	EPA-8260	**99.2**			50	150	08/27/2024	DLC
m,p-Xylene - BSD	EPA-8260	**90.9**	**9**		50	150	08/27/2024	DLC
Styrene - BS	EPA-8260	**101**			50	150	08/27/2024	DLC
Styrene - BSD	EPA-8260	**92.1**	**9**		50	150	08/27/2024	DLC
o-Xylene - BS	EPA-8260	**100**			50	150	08/27/2024	DLC
o-Xylene - BSD	EPA-8260	**92.4**	**8**		50	150	08/27/2024	DLC
Bromoform - BS	EPA-8260	**102**			50	150	08/27/2024	DLC
Bromoform - BSD	EPA-8260	**91.5**	**11**		50	150	08/27/2024	DLC
Isopropylbenzene - BS	EPA-8260	**98.4**			50	150	08/27/2024	DLC
Isopropylbenzene - BSD	EPA-8260	**90.5**	**8**		50	150	08/27/2024	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260	**123**			50	150	08/27/2024	DLC
1,1,2,2-Tetrachloroethane - BSD	EPA-8260	**107**	**14**		50	150	08/27/2024	DLC
1,2,3-Trichloropropane - BS	EPA-8260	**119**			50	150	08/27/2024	DLC
1,2,3-Trichloropropane - BSD	EPA-8260	**103**	**14**		50	150	08/27/2024	DLC
Bromobenzene - BS	EPA-8260	**109**			50	150	08/27/2024	DLC
Bromobenzene - BSD	EPA-8260	**98.4**	**11**		50	150	08/27/2024	DLC
N-Propyl Benzene - BS	EPA-8260	**104**			50	150	08/27/2024	DLC
N-Propyl Benzene - BSD	EPA-8260	**93.5**	**11**		50	150	08/27/2024	DLC
2-Chlorotoluene - BS	EPA-8260	**109**			50	150	08/27/2024	DLC
2-Chlorotoluene - BSD	EPA-8260	**97.9**	**10**		50	150	08/27/2024	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	**104**			50	150	08/27/2024	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	**93.8**	**10**		50	150	08/27/2024	DLC
4-Chlorotoluene - BS	EPA-8260	**106**			50	150	08/27/2024	DLC
4-Chlorotoluene - BSD	EPA-8260	**95.3**	**10**		50	150	08/27/2024	DLC
T-Butyl Benzene - BS	EPA-8260	**110**			50	150	08/27/2024	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan

CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
T-Butyl Benzene - BSD	EPA-8260	**99.8**	**10**		50	150	08/27/2024	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	**104**			50	150	08/27/2024	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	**95.6**	**9**		50	150	08/27/2024	DLC
S-Butyl Benzene - BS	EPA-8260	**106**			50	150	08/27/2024	DLC
S-Butyl Benzene - BSD	EPA-8260	**95.5**	**10**		50	150	08/27/2024	DLC
P-Isopropyltoluene - BS	EPA-8260	**105**			50	150	08/27/2024	DLC
P-Isopropyltoluene - BSD	EPA-8260	**95.7**	**9**		50	150	08/27/2024	DLC
1,3-Dichlorobenzene - BS	EPA-8260	**109**			50	150	08/27/2024	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	**100**	**9**		50	150	08/27/2024	DLC
1,4-Dichlorobenzene - BS	EPA-8260	**109**			50	150	08/27/2024	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	**98.8**	**10**		50	150	08/27/2024	DLC
N-Butylbenzene - BS	EPA-8260	**106**			50	150	08/27/2024	DLC
N-Butylbenzene - BSD	EPA-8260	**95.6**	**11**		50	150	08/27/2024	DLC
1,2-Dichlorobenzene - BS	EPA-8260	**111**			50	150	08/27/2024	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	**101**	**9**		50	150	08/27/2024	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	**127**			50	150	08/27/2024	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	**110**	**15**		50	150	08/27/2024	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260	**127**			50	150	08/27/2024	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260	**122**	**4**		50	150	08/27/2024	DLC
Hexachlorobutadiene - BS	EPA-8260	**115**			50	150	08/27/2024	DLC
Hexachlorobutadiene - BSD	EPA-8260	**107**	**7**		50	150	08/27/2024	DLC
Naphthalene - BS	EPA-8260	**137**			50	150	08/27/2024	DLC
Naphthalene - BSD	EPA-8260	**132**	**4**		50	150	08/27/2024	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	**148**			50	150	08/27/2024	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	**149**	**1**		50	150	08/27/2024	DLC

LCS03 - The LCS and/or LCSD recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is required for this analyte.

ALS Test Batch ID: 216965 - Soil by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**223**		SUR09	20	150	08/29/2024	DBA
Pyridine - BSD	EPA-8270	**232**	**4**	SUR09	20	150	08/29/2024	DBA
N-Nitrosodimethylamine - BS	EPA-8270	**91.1**			20	150	08/29/2024	DBA
N-Nitrosodimethylamine - BSD	EPA-8270	**86.9**	**5**		20	150	08/29/2024	DBA
Phenol - BS	EPA-8270	**92.0**			36.1	131	08/29/2024	DBA
Phenol - BSD	EPA-8270	**87.4**	**5**		36.1	131	08/29/2024	DBA
Aniline - BS	EPA-8270	**45.3**			20	150	08/29/2024	DBA
Aniline - BSD	EPA-8270	**43.7**	**4**		20	150	08/29/2024	DBA
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**92.7**			20	150	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**85.7**	**8**		20	150	08/29/2024	DBA
2-Chlorophenol - BS	EPA-8270	**94.9**			59.9	111	08/29/2024	DBA
2-Chlorophenol - BSD	EPA-8270	**89.8**	**6**		59.9	111	08/29/2024	DBA
1,3-Dichlorobenzene - BS	EPA-8270	**87.3**			20	150	08/29/2024	DBA
1,3-Dichlorobenzene - BSD	EPA-8270	**84.2**	**4**		20	150	08/29/2024	DBA
1,4-Dichlorobenzene - BS	EPA-8270	**87.4**			44.3	122	08/29/2024	DBA
1,4-Dichlorobenzene - BSD	EPA-8270	**81.4**	**7**		44.3	122	08/29/2024	DBA
Benzyl Alcohol - BS	EPA-8270	**97.4**			20	150	08/29/2024	DBA
Benzyl Alcohol - BSD	EPA-8270	**90.4**	**7**		20	150	08/29/2024	DBA
1,2-Dichlorobenzene - BS	EPA-8270	**86.7**			20	150	08/29/2024	DBA
1,2-Dichlorobenzene - BSD	EPA-8270	**80.5**	**7**		20	150	08/29/2024	DBA
2-Methylphenol - BS	EPA-8270	**99.8**			20	150	08/29/2024	DBA
2-Methylphenol - BSD	EPA-8270	**91.4**	**9**		20	150	08/29/2024	DBA
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**91.6**			20	150	08/29/2024	DBA
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**82.0**	**11**		20	150	08/29/2024	DBA
3&4-Methylphenol - BS	EPA-8270	**97.2**			20	150	08/29/2024	DBA
3&4-Methylphenol - BSD	EPA-8270	**90.8**	**7**		20	150	08/29/2024	DBA
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**91.6**			31.6	134	08/29/2024	DBA
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**85.7**	**7**		31.6	134	08/29/2024	DBA
Hexachloroethane - BS	EPA-8270	**94.8**			20	150	08/29/2024	DBA
Hexachloroethane - BSD	EPA-8270	**90.1**	**5**		20	150	08/29/2024	DBA
Nitrobenzene - BS	EPA-8270	**109**			20	150	08/29/2024	DBA
Nitrobenzene - BSD	EPA-8270	**103**	**6**		20	150	08/29/2024	DBA
Isophorone - BS	EPA-8270	**31.0**			20	150	08/29/2024	DBA
Isophorone - BSD	EPA-8270	**28.8**	**8**		20	150	08/29/2024	DBA
2-Nitrophenol - BS	EPA-8270	**104**			20	150	08/29/2024	DBA
2-Nitrophenol - BSD	EPA-8270	**100**	**4**		20	150	08/29/2024	DBA
2,4-Dimethylphenol - BS	EPA-8270	**189**		SUR09	20	150	08/29/2024	DBA
2,4-Dimethylphenol - BSD	EPA-8270	**176**	**7**	SUR09	20	150	08/29/2024	DBA
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**101**			20	150	08/29/2024	DBA
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**92.5**	**9**		20	150	08/29/2024	DBA
2,4-Dichlorophenol - BS	EPA-8270	**106**			20	150	08/29/2024	DBA
2,4-Dichlorophenol - BSD	EPA-8270	**97.8**	**8**		20	150	08/29/2024	DBA
1,2,4-Trichlorobenzene - BS	EPA-8270	**95.8**			44.6	122	08/29/2024	DBA
1,2,4-Trichlorobenzene - BSD	EPA-8270	**90.6**	**6**		44.6	122	08/29/2024	DBA
Naphthalene - BS	EPA-8270	**97.7**			20	150	08/29/2024	DBA
Naphthalene - BSD	EPA-8270	**91.8**	**6**		20	150	08/29/2024	DBA
4-Chloroaniline - BS	EPA-8270	**33.1**			20	150	08/29/2024	DBA
4-Chloroaniline - BSD	EPA-8270	**22.5**	**0**		20	150	08/29/2024	DBA
Hexachlorobutadiene - BS	EPA-8270	**99.1**			20	150	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Hexachlorobutadiene - BSD	EPA-8270	**93.5**	**6**		20	150	08/29/2024	DBA
4-Chloro-3-Methylphenol - BS	EPA-8270	**105**			49.2	135	08/29/2024	DBA
4-Chloro-3-Methylphenol - BSD	EPA-8270	**93.8**	**11**		49.2	135	08/29/2024	DBA
2-Methylnaphthalene - BS	EPA-8270	**95.3**			20	150	08/29/2024	DBA
2-Methylnaphthalene - BSD	EPA-8270	**87.5**	**9**		20	150	08/29/2024	DBA
1-Methylnaphthalene - BS	EPA-8270	**93.6**			20	150	08/29/2024	DBA
1-Methylnaphthalene - BSD	EPA-8270	**86.5**	**8**		20	150	08/29/2024	DBA
Hexachlorocyclopentadiene - BS	EPA-8270	**124**			20	150	08/29/2024	DBA
Hexachlorocyclopentadiene - BSD	EPA-8270	**127**	**2**		20	150	08/29/2024	DBA
2,4,6-Trichlorophenol - BS	EPA-8270	**104**			20	150	08/29/2024	DBA
2,4,6-Trichlorophenol - BSD	EPA-8270	**93.7**	**11**		20	150	08/29/2024	DBA
2,4,5-Trichlorophenol - BS	EPA-8270	**97.1**			20	150	08/29/2024	DBA
2,4,5-Trichlorophenol - BSD	EPA-8270	**92.6**	**5**		20	150	08/29/2024	DBA
2-Chloronaphthalene - BS	EPA-8270	**104**			20	150	08/29/2024	DBA
2-Chloronaphthalene - BSD	EPA-8270	**97.3**	**6**		20	150	08/29/2024	DBA
2-Nitroaniline - BS	EPA-8270	**97.4**			20	150	08/29/2024	DBA
2-Nitroaniline - BSD	EPA-8270	**93.4**	**4**		20	150	08/29/2024	DBA
Acenaphthylene - BS	EPA-8270	**119**			20	150	08/29/2024	DBA
Acenaphthylene - BSD	EPA-8270	**111**	**6**		20	150	08/29/2024	DBA
Dimethylphthalate - BS	EPA-8270	**107**			20	150	08/29/2024	DBA
Dimethylphthalate - BSD	EPA-8270	**97.4**	**10**		20	150	08/29/2024	DBA
2,6-Dinitrotoluene - BS	EPA-8270	**105**			20	150	08/29/2024	DBA
2,6-Dinitrotoluene - BSD	EPA-8270	**96.0**	**9**		20	150	08/29/2024	DBA
Acenaphthene - BS	EPA-8270	**98.9**			49.3	117	08/29/2024	DBA
Acenaphthene - BSD	EPA-8270	**93.9**	**5**		49.3	117	08/29/2024	DBA
3-Nitroaniline - BS	EPA-8270	**69.5**			20	150	08/29/2024	DBA
3-Nitroaniline - BSD	EPA-8270	**62.1**	**11**		20	150	08/29/2024	DBA
2,4-Dinitrophenol - BS	EPA-8270	**99.2**			20	150	08/29/2024	DBA
2,4-Dinitrophenol - BSD	EPA-8270	**96.2**	**3**		20	150	08/29/2024	DBA
4-Nitrophenol - BS	EPA-8270	**89.0**			29.8	137	08/29/2024	DBA
4-Nitrophenol - BSD	EPA-8270	**87.4**	**2**		29.8	137	08/29/2024	DBA
Dibenzofuran - BS	EPA-8270	**97.7**			20	150	08/29/2024	DBA
Dibenzofuran - BSD	EPA-8270	**90.7**	**7**		20	150	08/29/2024	DBA
2,4-Dinitrotoluene - BS	EPA-8270	**97.1**			55.3	130	08/29/2024	DBA
2,4-Dinitrotoluene - BSD	EPA-8270	**90.6**	**7**		55.3	130	08/29/2024	DBA
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**96.8**			20	150	08/29/2024	DBA
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**89.7**	**8**		20	150	08/29/2024	DBA
Diethylphthalate - BS	EPA-8270	**106**			20	150	08/29/2024	DBA
Diethylphthalate - BSD	EPA-8270	**94.9**	**11**		20	150	08/29/2024	DBA
Fluorene - BS	EPA-8270	**100**			20	150	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan
CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024
ALS SDG#: EV24080187
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Fluorene - BSD	EPA-8270	**93.5**	**7**		20	150	08/29/2024	DBA
4-Chlorophenyl-Phenylether - BS	EPA-8270	**103**			20	150	08/29/2024	DBA
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**95.2**	**8**		20	150	08/29/2024	DBA
4-Nitroaniline - BS	EPA-8270	**82.5**			20	150	08/29/2024	DBA
4-Nitroaniline - BSD	EPA-8270	**79.0**	**4**		20	150	08/29/2024	DBA
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**108**			20	150	08/29/2024	DBA
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**102**	**6**		20	150	08/29/2024	DBA
Azobenzene - BS	EPA-8270	**111**			20	150	08/29/2024	DBA
Azobenzene - BSD	EPA-8270	**99.5**	**11**		20	150	08/29/2024	DBA
4-Bromophenyl-Phenylether - BS	EPA-8270	**117**			20	150	08/29/2024	DBA
4-Bromophenyl-Phenylether - BSD	EPA-8270	**105**	**11**		20	150	08/29/2024	DBA
Hexachlorobenzene - BS	EPA-8270	**110**			20	150	08/29/2024	DBA
Hexachlorobenzene - BSD	EPA-8270	**102**	**8**		20	150	08/29/2024	DBA
Pentachlorophenol - BS	EPA-8270	**93.3**			41.3	113	08/29/2024	DBA
Pentachlorophenol - BSD	EPA-8270	**86.4**	**8**		41.3	113	08/29/2024	DBA
Phenanthrene - BS	EPA-8270	**104**			20	150	08/29/2024	DBA
Phenanthrene - BSD	EPA-8270	**94.9**	**9**		20	150	08/29/2024	DBA
Anthracene - BS	EPA-8270	**93.5**			20	150	08/29/2024	DBA
Anthracene - BSD	EPA-8270	**84.6**	**10**		20	150	08/29/2024	DBA
Carbazole - BS	EPA-8270	**100**			20	150	08/29/2024	DBA
Carbazole - BSD	EPA-8270	**92.6**	**8**		20	150	08/29/2024	DBA
Di-N-Butylphthalate - BS	EPA-8270	**109**			20	150	08/29/2024	DBA
Di-N-Butylphthalate - BSD	EPA-8270	**97.5**	**11**		20	150	08/29/2024	DBA
Fluoranthene - BS	EPA-8270	**109**			20	150	08/29/2024	DBA
Fluoranthene - BSD	EPA-8270	**100**	**9**		20	150	08/29/2024	DBA
Pyrene - BS	EPA-8270	**117**			57.4	145	08/29/2024	DBA
Pyrene - BSD	EPA-8270	**111**	**6**		57.4	145	08/29/2024	DBA
Butylbenzylphthalate - BS	EPA-8270	**110**			20	150	08/29/2024	DBA
Butylbenzylphthalate - BSD	EPA-8270	**100**	**9**		20	150	08/29/2024	DBA
Benzo[A]Anthracene - BS	EPA-8270	**110**			20	150	08/29/2024	DBA
Benzo[A]Anthracene - BSD	EPA-8270	**103**	**7**		20	150	08/29/2024	DBA
Chrysene - BS	EPA-8270	**102**			20	150	08/29/2024	DBA
Chrysene - BSD	EPA-8270	**95.0**	**7**		20	150	08/29/2024	DBA
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**109**			20	150	08/29/2024	DBA
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**98.0**	**11**		20	150	08/29/2024	DBA
Di-N-Octylphthalate - BS	EPA-8270	**111**			20	150	08/29/2024	DBA
Di-N-Octylphthalate - BSD	EPA-8270	**103**	**7**		20	150	08/29/2024	DBA
Benzo[B]Fluoranthene - BS	EPA-8270	**102**			20	150	08/29/2024	DBA
Benzo[B]Fluoranthene - BSD	EPA-8270	**89.7**	**13**		20	150	08/29/2024	DBA
Benzo[K]Fluoranthene - BS	EPA-8270	**110**			20	150	08/29/2024	DBA

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Bayshore Construction Co 16821 Smokey Point Blvd , #808 Arlington, WA 98223	DATE: ALS SDG#: WDOE ACCREDITATION:	9/26/2024 EV24080187 C601
CLIENT CONTACT:	Julie Eagan		
CLIENT PROJECT:	Port of Everett Fill Material		

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Benzo[K]Fluoranthene - BSD	EPA-8270	**103**	**7**		20	150	08/29/2024	DBA
Benzo[A]Pyrene - BS	EPA-8270	**83.3**			20	150	08/29/2024	DBA
Benzo[A]Pyrene - BSD	EPA-8270	**75.9**	**9**		20	150	08/29/2024	DBA
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**98.7**			20	150	08/29/2024	DBA
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**93.5**	**5**		20	150	08/29/2024	DBA
Dibenz[A,H]Anthracene - BS	EPA-8270	**96.5**			20	150	08/29/2024	DBA
Dibenz[A,H]Anthracene - BSD	EPA-8270	**91.4**	**5**		20	150	08/29/2024	DBA
Benzo[G,H,I]Perylene - BS	EPA-8270	**113**			20	150	08/29/2024	DBA
Benzo[G,H,I]Perylene - BSD	EPA-8270	**107**	**5**		20	150	08/29/2024	DBA

SURROGATE	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
2-Fluorobiphenyl - BS	EPA-8270	**129**		SUR09	46.2	121	08/29/2024	DBA
2-Fluorobiphenyl - BSD	EPA-8270	**126**		SUR09	46.2	121	08/29/2024	DBA
Terphenyl-d14 - BS	EPA-8270	**152**		SUR09	50.2	131	08/29/2024	DBA
Terphenyl-d14 - BSD	EPA-8270	**140**		SUR09	50.2	131	08/29/2024	DBA

SUR09 - Surrogate outside of control limits with a high bias. Associated compounds non-detect. No corrective action taken.

ALS Test Batch ID: 216969 - Soil by EPA-8082

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - BS	EPA-8082	**72.9**			50	150	08/30/2024	DBA
PCB-1016 - BSD	EPA-8082	**79.2**	**8**		50	150	08/30/2024	DBA
PCB-1260 - BS	EPA-8082	**86.3**			50	150	08/30/2024	DBA
PCB-1260 - BSD	EPA-8082	**93.0**	**7**		50	150	08/30/2024	DBA

ALS Test Batch ID: R476181 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**103**			81.8	117	09/03/2024	RAL
Mercury - BSD	EPA-7471	**104**	**1**		81.8	117	09/03/2024	RAL

ALS Test Batch ID: 216841 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Antimony - BS	EPA-6020	**93.2**			80	120	08/28/2024	EBS
Antimony - BSD	EPA-6020	**93.4**	**0**		80	120	08/28/2024	EBS
Arsenic - BS	EPA-6020	**96.1**			80	120	08/28/2024	EBS
Arsenic - BSD	EPA-6020	**95.8**	**0**		80	120	08/28/2024	EBS
Beryllium - BS	EPA-6020	**91.4**			80	120	08/28/2024	EBS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Bayshore Construction Co
16821 Smokey Point Blvd , #808
Arlington, WA 98223

CLIENT CONTACT: Julie Eagan

CLIENT PROJECT: Port of Everett Fill Material

DATE: 9/26/2024

ALS SDG#: EV24080187

WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Beryllium - BSD	EPA-6020	**93.6**	**2**		80	120	08/28/2024	EBS
Cadmium - BS	EPA-6020	**98.4**			80	120	08/28/2024	EBS
Cadmium - BSD	EPA-6020	**98.4**	**0**		80	120	08/28/2024	EBS
Chromium - BS	EPA-6020	**95.7**			80	120	08/28/2024	EBS
Chromium - BSD	EPA-6020	**94.7**	**1**		80	120	08/28/2024	EBS
Copper - BS	EPA-6020	**100**			80	120	08/28/2024	EBS
Copper - BSD	EPA-6020	**99.2**	**1**		80	120	08/28/2024	EBS
Lead - BS	EPA-6020	**96.4**			80	120	08/28/2024	EBS
Lead - BSD	EPA-6020	**94.9**	**2**		80	120	08/28/2024	EBS
Nickel - BS	EPA-6020	**98.7**			80	120	08/28/2024	EBS
Nickel - BSD	EPA-6020	**98.5**	**0**		80	120	08/28/2024	EBS
Selenium - BS	EPA-6020	**97.2**			80	120	08/28/2024	EBS
Selenium - BSD	EPA-6020	**96.7**	**1**		80	120	08/28/2024	EBS
Silver - BS	EPA-6020	**96.1**			80	120	08/28/2024	EBS
Silver - BSD	EPA-6020	**96.9**	**1**		80	120	08/28/2024	EBS
Thallium - BS	EPA-6020	**96.0**			80	120	08/28/2024	EBS
Thallium - BSD	EPA-6020	**97.5**	**2**		80	120	08/28/2024	EBS
Zinc - BS	EPA-6020	**97.4**			80	119	08/28/2024	EBS
Zinc - BSD	EPA-6020	**98.6**	**1**		80	119	08/28/2024	EBS

APPROVED BY

Carl Nott
Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24080187

Date _____ Page _____ Of _____

PROJECT ID: Port of Everett Fill material
REPORT TO COMPANY: Bayshore Const
PROJECT MANAGER: Julie Eagan
ADDRESS: 16821 Smokey Pt Blvd #808
Arlington, WA 98223
PHONE: 425.268.9703 P.O. #: marine Terminal
E-MAIL: julie@bayshoreco.com
INVOICE TO COMPANY: same
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. CalPortland	08/26/24	4:30p	S	1
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

ANALYSIS REQUESTED

NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐	BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐	MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☒	Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐	RCRA-8 ☐	Pri Pol ☐	TAL ☐	Metals Other (Specify) ~~Sb, As, Ba, Cd, Cr, Pb, Ni, Se~~	TCLP-Metals ☐	VOA ☐	Semi-Vol ☐	Pest ☐	Herbs ☐
	3	SG c/Prep																						
	X	X						X			X	X	X					X					

OTHER (Specify)

							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
Sb, As, Ba, Cd, Cr, Pb, Ni,	Se, Ag, Tl, Zn, Hg	Dioxin						
X	X	X						

SPECIAL INSTRUCTIONS: Send results w/o Dioxin when finished, don't wait for Dioxin. Dioxin is EV24080182 on

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Julie Eagan, Bayshore, 8/27/24, 12:20
   Received By: ALS 8/27/24 1220
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | X | 2 | ~~1~~ | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify: _____

*Turnaround request less than standard may incur Rush Charges

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

SAMPLE RECEIVING CHECKLIST

Client: Bayshore Construction
Project: Port of Everett Fill material

ALS Job #: EV2408018 7
Login Date: 8/27/24
Login Time: 1220
Login By: AV

Type of Shipping Container:
- ☒ Cooler
- ☐ Box
- ☐ Other: _____

Shipped Via:
- ☐ FedEx Ground
- ☐ FedEx Express
- ☐ UPS
- ☐ External Courier
- ☐ ALS Courier
- ☒ Hand Delivered

	Yes	No	N/A
Were custody seals on the outside of the shipping container? How Many? ____ Where? ____ Date: ____ Name: ____			✓
Was CoC filled out properly? (in ink, signed, dated, etc.)	✓		
Did all bottles have labels?	✓		
Did all bottle labels and tags agree with CoC?	✓		
Were samples received within hold time?	✓		
Did all bottles arrive in good condition?	✓		
Was sufficient amount of sample sent for tests requested?	✓		
Was correct preservation added to samples?	✓		
Subcontract test containers added to subcontract bin?	✓		
Wetchem test containers marked with applicable tests?			✓
Short hold time test containers delivered to analysts?			✓
VOA vials checked for bubbles? Bubbles in sample number(s): ____			✓
5035A kits received? Low kits: 1 High kits: ____	✓		
5035A kits returned? Low kits: ____ High kits: ____			✓

Temperature upon receipt: 18.1 °C
On ice? ✓
Thermometer ID: Oakton

Other discrepancies:

Was client contacted? ____ Who was called? ____ By whom? ____ Date: ____
Outcome of call:

ALS Environmental – Everett
8620 Holly Dr. STE 100
Everett, WA 98012
(425) 356 - 2600

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Rob Greer
ALS Global
8620 Holly Drive
Everett, Washington 98208

Generated 9/18/2024 5:28:08 PM

JOB DESCRIPTION

Dioxin

JOB NUMBER

320-114934-1

Eurofins Sacramento
880 Riverside Parkway
West Sacramento CA 95605

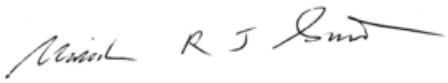
See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization



Generated
9/18/2024 5:28:08 PM

Authorized for release by
Micah Smith, Project Manager II
Micah.Smith@et.eurofinsus.com
Designee for
Nathaniel Horner, Project Management Assistant I
Nathaniel.Horner@et.eurofinsus.com
(916)374-4306

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 7
Isotope Dilution Summary 8
QC Sample Results 9
QC Association Summary 12
Lab Chronicle 13
Certification Summary 14
Method Summary 15
Sample Summary 16
Chain of Custody 17
Receipt Checklists 19

Definitions/Glossary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114934-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 320-114934-1 — Eurofins Sacramento

Job Narrative
320-114934-1

Receipt
The sample was received on 8/29/2024 9:00 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.2º C.

Dioxin
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Dioxin Prep
Method 8290: Sample EV24080194-01 (320-114934-1) had a dark color after macro-concentration. All samples put through acid wash clean-up prior to acid silica/acid alumina clean-up columns.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114934-1

Client Sample ID: EV24080194-01 — Lab Sample ID: 320-114934-1

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: EV24080194-01

Date Collected: 08/27/24 08:00
Date Received: 08/29/24 09:00

Lab Sample ID: 320-114934-1

Matrix: Solid
Percent Solids: 95.8

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
2,3,7,8-TCDF	ND		1.0		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,7,8-PeCDD	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,7,8-PeCDF	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
2,3,4,7,8-PeCDF	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,4,7,8-HxCDD	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,6,7,8-HxCDD	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,7,8,9-HxCDD	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,4,7,8-HxCDF	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,6,7,8-HxCDF	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,7,8,9-HxCDF	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
2,3,4,6,7,8-HxCDF	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,4,6,7,8-HpCDD	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,4,6,7,8-HpCDF	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
1,2,3,4,7,8,9-HpCDF	ND		5.2		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
OCDD	ND		10		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1
OCDF	ND		10		pg/g	☼	09/04/24 08:20	09/17/24 03:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*59*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-2,3,7,8-TCDF	*57*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,7,8-PeCDD	*65*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,7,8-PeCDF	*60*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-2,3,4,7,8-PeCDF	*65*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,4,7,8-HxCDD	*65*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,6,7,8-HxCDD	*63*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,4,7,8-HxCDF	*62*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-2,3,4,6,7,8-HxCDF	*67*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,6,7,8-HxCDF	*63*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,7,8,9-HxCDF	*63*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*68*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*59*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*69*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-OCDD	*63*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*
13C-OCDF	*64*		*40 - 135*	*09/04/24 08:20*	*09/17/24 03:59*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (ASTM D 2216)	**4.2**		0.1		%			09/06/24 17:20	1
Percent Solids (ASTM D 2216)	**95.8**		0.1		%			09/06/24 17:20	1

Isotope Dilution Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114934-1

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF (40-135)	PeCF (40-135)	HxCDD (40-135)	HxDD (40-135)	HxCDF (40-135)
320-114934-1	EV24080194-01	59	57	65	60	65	65	63	62
LCS 320-796431/2-A	Lab Control Sample	60	58	66	63	67	70	67	68
LCSD 320-796431/3-A	Lab Control Sample Dup	58	58	66	62	68	71	67	69
MB 320-796431/1-A	Method Blank	58	55	64	59	63	66	61	63

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	13CHxCF (40-135)	HxDF (40-135)	HxCF (40-135)	HpCDD (40-135)	HpCDF (40-135)	HpCDF2 (40-135)	OCDD (40-135)	OCDF (40-135)
320-114934-1	EV24080194-01	67	63	63	68	59	69	63	64
LCS 320-796431/2-A	Lab Control Sample	68	69	64	69	63	70	66	68
LCSD 320-796431/3-A	Lab Control Sample Dup	69	70	64	69	63	69	64	66
MB 320-796431/1-A	Method Blank	64	64	60	64	57	65	61	61

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCF = 13C-2,3,4,7,8-PeCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-796431/1-A
Matrix: Solid
Analysis Batch: 799678

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 796431

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
2,3,7,8-TCDF	ND		1.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,7,8-PeCDD	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,7,8-PeCDF	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
2,3,4,7,8-PeCDF	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,4,7,8-HxCDD	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,6,7,8-HxCDD	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,7,8,9-HxCDD	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,4,7,8-HxCDF	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,6,7,8-HxCDF	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,7,8,9-HxCDF	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
2,3,4,6,7,8-HxCDF	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,4,6,7,8-HpCDD	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,4,6,7,8-HpCDF	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
1,2,3,4,7,8,9-HpCDF	ND		5.0		pg/g		09/04/24 08:20	09/16/24 21:32	1
OCDD	ND		10		pg/g		09/04/24 08:20	09/16/24 21:32	1
OCDF	ND		10		pg/g		09/04/24 08:20	09/16/24 21:32	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*58*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-2,3,7,8-TCDF	*55*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,7,8-PeCDD	*64*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-2,3,4,7,8-PeCDF	*63*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,4,7,8-HxCDD	*66*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,6,7,8-HxCDD	*61*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,4,7,8-HxCDF	*63*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-2,3,4,6,7,8-HxCDF	*64*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,6,7,8-HxCDF	*64*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,7,8,9-HxCDF	*60*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*64*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*57*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*65*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-OCDD	*61*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*
13C-OCDF	*61*		*40 - 135*	*09/04/24 08:20*	*09/16/24 21:32*	*1*

Lab Sample ID: LCS 320-796431/2-A
Matrix: Solid
Analysis Batch: 799678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 796431

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDD	20.0	21.3		pg/g		106	73 - 141
2,3,7,8-TCDF	20.0	22.0		pg/g		110	71 - 153
1,2,3,7,8-PeCDD	100	99.3		pg/g		99	77 - 126
1,2,3,7,8-PeCDF	100	101		pg/g		101	72 - 128
2,3,4,7,8-PeCDF	100	94.4		pg/g		94	72 - 127
1,2,3,4,7,8-HxCDD	100	90.6		pg/g		91	73 - 126
1,2,3,6,7,8-HxCDD	100	100		pg/g		100	76 - 142
1,2,3,7,8,9-HxCDD	100	92.8		pg/g		93	70 - 136

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-796431/2-A
Matrix: Solid
Analysis Batch: 799678

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 796431

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3,4,7,8-HxCDF			100	96.7		pg/g		97	73 - 127		
1,2,3,6,7,8-HxCDF			100	99.7		pg/g		100	77 - 126		
1,2,3,7,8,9-HxCDF			100	99.2		pg/g		99	77 - 125		
2,3,4,6,7,8-HxCDF			100	101		pg/g		101	77 - 126		
1,2,3,4,6,7,8-HpCDD			100	97.9		pg/g		98	79 - 121		
1,2,3,4,6,7,8-HpCDF			100	102		pg/g		102	78 - 138		
1,2,3,4,7,8,9-HpCDF			100	91.8		pg/g		92	76 - 123		
OCDD			200	201		pg/g		101	76 - 136		
OCDF			200	190		pg/g		95	75 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*60*		*40 - 135*
13C-2,3,7,8-TCDF	*58*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*66*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*63*		*40 - 135*
13C-2,3,4,7,8-PeCDF	*67*		*40 - 135*
13C-1,2,3,4,7,8-HxCDD	*70*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*67*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*68*		*40 - 135*
13C-2,3,4,6,7,8-HxCDF	*68*		*40 - 135*
13C-1,2,3,6,7,8-HxCDF	*69*		*40 - 135*
13C-1,2,3,7,8,9-HxCDF	*64*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*69*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*63*		*40 - 135*
13C-1,2,3,4,7,8,9-HpCDF	*70*		*40 - 135*
13C-OCDD	*66*		*40 - 135*
13C-OCDF	*68*		*40 - 135*

Lab Sample ID: LCSD 320-796431/3-A
Matrix: Solid
Analysis Batch: 799678

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 796431

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,3,7,8-TCDD			20.0	21.5		pg/g		108	73 - 141	1	20
2,3,7,8-TCDF			20.0	22.4		pg/g		112	71 - 153	2	20
1,2,3,7,8-PeCDD			100	98.2		pg/g		98	77 - 126	1	20
1,2,3,7,8-PeCDF			100	102		pg/g		102	72 - 128	0	20
2,3,4,7,8-PeCDF			100	96.1		pg/g		96	72 - 127	2	20
1,2,3,4,7,8-HxCDD			100	90.3		pg/g		90	73 - 126	0	20
1,2,3,6,7,8-HxCDD			100	101		pg/g		101	76 - 142	1	20
1,2,3,7,8,9-HxCDD			100	91.1		pg/g		91	70 - 136	2	20
1,2,3,4,7,8-HxCDF			100	97.6		pg/g		98	73 - 127	1	20
1,2,3,6,7,8-HxCDF			100	102		pg/g		102	77 - 126	2	20
1,2,3,7,8,9-HxCDF			100	101		pg/g		101	77 - 125	2	20
2,3,4,6,7,8-HxCDF			100	101		pg/g		101	77 - 126	1	20
1,2,3,4,6,7,8-HpCDD			100	96.9		pg/g		97	79 - 121	1	20
1,2,3,4,6,7,8-HpCDF			100	104		pg/g		104	78 - 138	2	20
1,2,3,4,7,8,9-HpCDF			100	91.8		pg/g		92	76 - 123	0	20
OCDD			200	203		pg/g		101	76 - 136	1	20

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-796431/3-A
Matrix: Solid
Analysis Batch: 799678

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 796431

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
OCDF			200	191		pg/g		95	75 - 130	0	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*58*		*40 - 135*
13C-2,3,7,8-TCDF	*58*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*66*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*62*		*40 - 135*
13C-2,3,4,7,8-PeCDF	*68*		*40 - 135*
13C-1,2,3,4,7,8-HxCDD	*71*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*67*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*69*		*40 - 135*
13C-2,3,4,6,7,8-HxCDF	*69*		*40 - 135*
13C-1,2,3,6,7,8-HxCDF	*70*		*40 - 135*
13C-1,2,3,7,8,9-HxCDF	*64*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*69*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*63*		*40 - 135*
13C-1,2,3,4,7,8,9-HpCDF	*69*		*40 - 135*
13C-OCDD	*64*		*40 - 135*
13C-OCDF	*66*		*40 - 135*

QC Association Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114934-1

Specialty Organics

Prep Batch: 796431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-114934-1	EV24080194-01	Total/NA	Solid	8290	
MB 320-796431/1-A	Method Blank	Total/NA	Solid	8290	
LCS 320-796431/2-A	Lab Control Sample	Total/NA	Solid	8290	
LCSD 320-796431/3-A	Lab Control Sample Dup	Total/NA	Solid	8290	

Analysis Batch: 799678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-114934-1	EV24080194-01	Total/NA	Solid	8290A	796431
MB 320-796431/1-A	Method Blank	Total/NA	Solid	8290A	796431
LCS 320-796431/2-A	Lab Control Sample	Total/NA	Solid	8290A	796431
LCSD 320-796431/3-A	Lab Control Sample Dup	Total/NA	Solid	8290A	796431

General Chemistry

Analysis Batch: 797336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-114934-1	EV24080194-01	Total/NA	Solid	D 2216	

Lab Chronicle

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114934-1

Client Sample ID: EV24080194-01
Date Collected: 08/27/24 08:00
Date Received: 08/29/24 09:00

Lab Sample ID: 320-114934-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1			797336	09/06/24 17:20	AS	EET SAC

Client Sample ID: EV24080194-01
Date Collected: 08/27/24 08:00
Date Received: 08/29/24 09:00

Lab Sample ID: 320-114934-1
Matrix: Solid
Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			10.01 g	20.0 uL	796431	09/04/24 08:20	CS	EET SAC
Total/NA	Analysis	8290A		1	1 Sample	1 Sample	799678	09/17/24 03:59	CB	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114934-1

Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
D 2216		Solid	Percent Moisture
D 2216		Solid	Percent Solids

Method Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114934-1

Method	Method Description	Protocol	Laboratory
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	EET SAC
D 2216	Percent Moisture	ASTM	EET SAC
8290	Soxhlet Extraction of Dioxins and Furans	SW846	EET SAC

Protocol References:

ASTM = ASTM International

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: ALS Global
Project/Site: Dioxin

Job ID: 320-114934-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-114934-1	EV24080194-01	Solid	08/27/24 08:00	08/29/24 09:00

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)
EV24080194

Date _____ Page _____ Of _____

9/18/2024

PROJECT ID:	EV24080194
REPORT TO COMPANY:	ALS Environmental
PROJECT MANAGER:	Carl Nott
ADDRESS	8620 Holly Drive #100
	Everett WA 98208
PHONE:	(425) 356-2600 PO #: 32-EV24080194
E-MAIL:	carl.nott@alsglobal.com
INVOICE TO COMPANY:	
ATTENTION	Same
ADDRESS:	

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
																				Dioxin / Furan							
1. EV24080194-01	8/27/24	0800	S																	X							
2.																											
3.																											
4.																											
5.																											
6.																											
7.																											
8.																											
9.																											
10.																											

320-114934 Chain of Custody

SPECIAL INSTRUCTIONS Please email results by 09/18/24 Thank you

SIGNATURES (Name, Company, Date, Time):

1 Relinquished By: [signature] ALS 8/28/24 1211

Received By: [signature] 6/28/24 0960

2. Relinquished By: _____

Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis
10 (Standard) 5 3 2 1 SAME DAY

Fuels & Hydrocarbon Analysis
2.2C 5 (Standard) 3 1 SAME DAY

OTHER.
Specify: _____

*Turnaround request less than standard may incur Rush Charges

eurofins | Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Loc: 320
114934

Tracking # 7782 9341 0564

Job _____ _____

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC

Therm. ID: 112 Corr. Factor: (+ / -) _____ °C

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: _____

Cooler ID: _____

Temp Observed 2.2 °C Corrected 2.2 °C
From Temp Blank ☐ Sample ☑

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☑	☐	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials. FSH Date. 8/29/24

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☑	☐	☐
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials FSH Date 8/29/24

Notes:_____

Trizma Lot #(s) _____

Ammonium
Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☐	☐	☑
Samples received within hold time?	☑	☐	☐
Log Release checked in TALS?	☑	☐	☐

Initials. FSH Date. 8/29/24

Login Sample Receipt Checklist

Client: ALS Global

Job Number: 320-114934-1

Login Number: 114934
List Number: 1
Creator: Soto-Hernandez, Flor N

List Source: Eurofins Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	REFER TO SSRN
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	N/A	
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	N/A	
Samples are received within Holding Time (excluding tests with immediate HTs)	N/A	
Sample containers have legible labels.	N/A	
Containers are not broken or leaking.	N/A	
Sample collection date/times are provided.	N/A	
Appropriate sample containers are used.	N/A	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Appendix G

Post-Construction Stormwater Laboratory Reports

Sample Collection Record Form

Site: Marine Terminals (WAR001207)

Date: 2/25/2025

Weather Conditions: Rain

Date Analytical Results Submitted to Ecology: TBD

Sampling By: TJ Colebourn + Chris Petersson + Jake Kirschner

Date Samples Submitted to Laboratory for Analyses: 2/26/2025

Date of First Runoff Event After September 1 (First Fall Event): N/A

Sample Collection Location	Method of Sample Collection and Preservation	Sample Collection Time	Visual Sheen Present?	pH Field Measurement Reading	Turbidity Measurement Reading	Sample Collected Within First 12 Hours of Discharge Event? (or Explanation as to Why Not Possible)	Conditions that Could Affect Sampling
001	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*	9.25 AM	No	7.61	6.07	Yes	N/A
	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*						
	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*						
	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*						

* Standard Method and Handling Procedures - Standard methods for sample collection and preservation are outlined in detail within the "Sampling Methods and Handling Procedures" section of each facility's Storm Water Pollution Prevention Plan

Signature:

Date: 2/26/2025

#100 8620 Holly Drive
Everett, WA 98208, USA
T: +1 425 356 2600
F: +1 425 356 2626

March 05, 2025

Jacob Kirschner
Port of Everett
1205 Craftsman Way
Suite 200
Everett, WA 98201

Work Order: **EV25020144**

Laboratory Results for: **MARINE TERMINAL**

Dear Jacob Kirschner,

ALS Environmental received 7 sample(s) on Feb 26, 2025 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

//CN//

Generated By: CYNTHIA.CANTU
Carl Nott
Laboratory Director

Client: Port of Everett
Project: MARINE TERMINAL
Work Order: EV25020144

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
EV25020144-01	001	Water		25-Feb-2025 09:25	26-Feb-2025 10:17	☐
EV25020144-02	002	Water		25-Feb-2025 09:30	26-Feb-2025 10:17	☐
EV25020144-03	006	Water		25-Feb-2025 09:42	26-Feb-2025 10:17	☐
EV25020144-04	007	Water		25-Feb-2025 09:55	26-Feb-2025 10:17	☐
EV25020144-05	009	Water		25-Feb-2025 10:05	26-Feb-2025 10:17	☐
EV25020144-06	012A	Water		25-Feb-2025 10:10	26-Feb-2025 10:17	☐
EV25020144-07	P3S	Water		25-Feb-2025 10:20	26-Feb-2025 10:17	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett **CASE NARRATIVE**
Project: MARINE TERMINAL
Work Order: EV25020144

GC Semivolatile Organics by Method NWTPH-DX

Batch ID: 224932

Sample ID: 001 (EV25020144-01)

- 1DC1;

Sample ID: 002 (EV25020144-02)

- 2DC1;MC1;

Sample ID: 006 (EV25020144-03)

- None

Sample ID: 007 (EV25020144-04)

- None

Sample ID: 009 (EV25020144-05)

- None

Sample ID: 012A (EV25020144-06)

- 1MC1;

Sample ID: BS-022825W

- None

Sample ID: BSD-022825W

- None

Sample ID: MB-022825W

- None

Sample ID: P3S (EV25020144-07)

- None

Metals by Method EPA-6020

Batch ID: 224804

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Wet Chemistry by Method SM2540D

Batch ID: R508036

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
Sample ID: 001
Collection Date: 25-Feb-2025 09:25

ANALYTICAL REPORT
WorkOrder:EV25020144
Lab ID:EV25020144-01
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH-DIESEL		**Method:NWTPH-DX**		Prep:SW3510 / 28-Feb-2025		Analyst: ABD
TPH-Diesel Range	**0.18**		**0.14**	**mg/L**	1	03-Mar-2025 20:59
TPH-Oil Range	ND		0.25	mg/L	1	03-Mar-2025 20:59
Surr: C25	*96.4*		*60-126*	*%REC*	*1*	*03-Mar-2025 20:59*
ICP/MS METALS ANALYSIS BY EPA-200.8		**Method:EPA-6020**		Prep:EPA 3010 / 27-Feb-2025		Analyst: RAL
Copper	ND		2.0	UG/L	1	27-Feb-2025 17:49
Zinc	**31**		**2.5**	**UG/L**	1	27-Feb-2025 17:49
TOTAL SUSPENDED SOLIDS BY SM2540D		**Method:SM2540D**				Analyst: DHM
Total Suspended Solids	ND		25	MG/L	1	27-Feb-2025 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
Sample ID: 002
Collection Date: 25-Feb-2025 09:30

ANALYTICAL REPORT
WorkOrder:EV25020144
Lab ID:EV25020144-02
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH-DIESEL		**Method:NWTPH-DX**		Prep:SW3510 / 28-Feb-2025		Analyst: ABD
TPH-Diesel Range	**0.16**		**0.13**	**mg/L**	1	03-Mar-2025 21:24
TPH-Oil Range	**0.31**		**0.25**	**mg/L**	1	03-Mar-2025 21:24
Surr: C25	*96.2*		*60-126*	*%REC*	*1*	*03-Mar-2025 21:24*
ICP/MS METALS ANALYSIS BY EPA-200.8		**Method:EPA-6020**		Prep:EPA 3010 / 27-Feb-2025		Analyst: RAL
Copper	ND		2.0	UG/L	1	27-Feb-2025 17:51
Zinc	**49**		**2.5**	**UG/L**	1	27-Feb-2025 17:51
TOTAL SUSPENDED SOLIDS BY SM2540D		**Method:SM2540D**				Analyst: DHM
Total Suspended Solids	ND		25	MG/L	1	27-Feb-2025 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
Sample ID: 006
Collection Date: 25-Feb-2025 09:42

ANALYTICAL REPORT
WorkOrder:EV25020144
Lab ID:EV25020144-03
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH-DIESEL		**Method:NWTPH-DX**		Prep:SW3510 / 28-Feb-2025		Analyst: ABD
TPH-Diesel Range	ND		0.13	mg/L	1	03-Mar-2025 21:50
TPH-Oil Range	ND		0.25	mg/L	1	03-Mar-2025 21:50
Surr: C25	*94.2*		*60-126*	*%REC*	*1*	*03-Mar-2025 21:50*
ICP/MS METALS ANALYSIS BY EPA-200.8		**Method:EPA-6020**		Prep:EPA 3010 / 27-Feb-2025		Analyst: RAL
Copper	ND		2.0	UG/L	1	27-Feb-2025 17:53
Zinc	**57**		**2.5**	**UG/L**	1	27-Feb-2025 17:53
TOTAL SUSPENDED SOLIDS BY SM2540D		**Method:SM2540D**				Analyst: DHM
Total Suspended Solids	ND		25	MG/L	1	27-Feb-2025 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
Sample ID: 007
Collection Date: 25-Feb-2025 09:55

ANALYTICAL REPORT
WorkOrder:EV25020144
Lab ID:EV25020144-04
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH-DIESEL		**Method:NWTPH-DX**		Prep:SW3510 / 28-Feb-2025		Analyst: ABD
TPH-Diesel Range	ND		0.13	mg/L	1	03-Mar-2025 22:16
TPH-Oil Range	ND		0.25	mg/L	1	03-Mar-2025 22:16
Surr: C25	*89.2*		*60-126*	*%REC*	*1*	*03-Mar-2025 22:16*
ICP/MS METALS ANALYSIS BY EPA-200.8		**Method:EPA-6020**		Prep:EPA 3010 / 27-Feb-2025		Analyst: RAL
Copper	ND		2.0	UG/L	1	27-Feb-2025 18:04
Zinc	**66**		**2.5**	**UG/L**	1	27-Feb-2025 18:04
TOTAL SUSPENDED SOLIDS BY SM2540D		**Method:SM2540D**				Analyst: DHM
Total Suspended Solids	ND		25	MG/L	1	27-Feb-2025 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
Sample ID: 009
Collection Date: 25-Feb-2025 10:05

ANALYTICAL REPORT
WorkOrder:EV25020144
Lab ID:EV25020144-05
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH-DIESEL		**Method:NWTPH-DX**		Prep:SW3510 / 28-Feb-2025		Analyst: ABD
TPH-Diesel Range	ND		0.13	mg/L	1	03-Mar-2025 22:41
TPH-Oil Range	ND		0.25	mg/L	1	03-Mar-2025 22:41
Surr: C25	*95.6*		*60-126*	*%REC*	*1*	*03-Mar-2025 22:41*
ICP/MS METALS ANALYSIS BY EPA-200.8		**Method:EPA-6020**		Prep:EPA 3010 / 27-Feb-2025		Analyst: RAL
Copper	**4.6**		**2.0**	**UG/L**	1	27-Feb-2025 18:06
Zinc	**8.5**		**2.5**	**UG/L**	1	27-Feb-2025 18:06
TOTAL SUSPENDED SOLIDS BY SM2540D		**Method:SM2540D**				Analyst: DHM
Total Suspended Solids	ND		25	MG/L	1	27-Feb-2025 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
Sample ID: 012A
Collection Date: 25-Feb-2025 10:10

ANALYTICAL REPORT
WorkOrder:EV25020144
Lab ID:EV25020144-06
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH-DIESEL		**Method:NWTPH-DX**		Prep:SW3510 / 28-Feb-2025		Analyst: ABD
TPH-Diesel Range	ND		0.14	mg/L	1	03-Mar-2025 23:07
TPH-Oil Range	**0.25**		**0.25**	**mg/L**	1	03-Mar-2025 23:07
Surr: C25	*89.2*		*60-126*	*%REC*	*1*	*03-Mar-2025 23:07*
ICP/MS METALS ANALYSIS BY EPA-200.8		**Method:EPA-6020**		Prep:EPA 3010 / 27-Feb-2025		Analyst: RAL
Copper	**12**		**2.0**	**UG/L**	1	27-Feb-2025 18:09
Zinc	**39**		**2.5**	**UG/L**	1	27-Feb-2025 18:09
TOTAL SUSPENDED SOLIDS BY SM2540D		**Method:SM2540D**				Analyst: DHM
Total Suspended Solids	ND		25	MG/L	1	27-Feb-2025 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
Sample ID: P3S
Collection Date: 25-Feb-2025 10:20

ANALYTICAL REPORT
WorkOrder:EV25020144
Lab ID:EV25020144-07
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TPH-DIESEL		**Method:NWTPH-DX**		Prep:SW3510 / 28-Feb-2025		Analyst: ABD
TPH-Diesel Range	ND		0.13	mg/L	1	03-Mar-2025 23:32
TPH-Oil Range	ND		0.25	mg/L	1	03-Mar-2025 23:32
Surr: C25	*93.7*		*60-126*	*%REC*	*1*	*03-Mar-2025 23:32*
ICP/MS METALS ANALYSIS BY EPA-200.8		**Method:EPA-6020**		Prep:EPA 3010 / 27-Feb-2025		Analyst: RAL
Copper	**6.7**		**2.0**	**UG/L**	1	27-Feb-2025 18:11
Zinc	**66**		**2.5**	**UG/L**	1	27-Feb-2025 18:11
TOTAL SUSPENDED SOLIDS BY SM2540D		**Method:SM2540D**				Analyst: DHM
Total Suspended Solids	ND		25	MG/L	1	27-Feb-2025 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
WorkOrder: EV25020144

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 224804 (0)	**Test Name :** ICP/MS METALS ANALYSIS BY EPA-200.8				**Matrix:** Water	
EV25020144-01	001	25 Feb 2025 09:25		27 Feb 2025 10:00	27 Feb 2025 17:49	1
EV25020144-02	002	25 Feb 2025 09:30		27 Feb 2025 10:00	27 Feb 2025 17:51	1
EV25020144-03	006	25 Feb 2025 09:42		27 Feb 2025 10:00	27 Feb 2025 17:53	1
EV25020144-04	007	25 Feb 2025 09:55		27 Feb 2025 10:00	27 Feb 2025 18:04	1
EV25020144-05	009	25 Feb 2025 10:05		27 Feb 2025 10:00	27 Feb 2025 18:06	1
EV25020144-06	012A	25 Feb 2025 10:10		27 Feb 2025 10:00	27 Feb 2025 18:09	1
EV25020144-07	P3S	25 Feb 2025 10:20		27 Feb 2025 10:00	27 Feb 2025 18:11	1
Batch ID: 224932 (0)	**Test Name :** TPH-DIESEL				**Matrix:** Water	
EV25020144-01	001	25 Feb 2025 09:25		28 Feb 2025 09:00	03 Mar 2025 20:59	1
EV25020144-02	002	25 Feb 2025 09:30		28 Feb 2025 09:00	03 Mar 2025 21:24	1
EV25020144-03	006	25 Feb 2025 09:42		28 Feb 2025 09:00	03 Mar 2025 21:50	1
EV25020144-04	007	25 Feb 2025 09:55		28 Feb 2025 09:00	03 Mar 2025 22:16	1
EV25020144-05	009	25 Feb 2025 10:05		28 Feb 2025 09:00	03 Mar 2025 22:41	1
EV25020144-06	012A	25 Feb 2025 10:10		28 Feb 2025 09:00	03 Mar 2025 23:07	1
EV25020144-07	P3S	25 Feb 2025 10:20		28 Feb 2025 09:00	03 Mar 2025 23:32	1
Batch ID: R508036 (0)	**Test Name :** TOTAL SUSPENDED SOLIDS BY SM2540D				**Matrix:** Water	
EV25020144-01	001	25 Feb 2025 09:25			27 Feb 2025 13:30	1
EV25020144-02	002	25 Feb 2025 09:30			27 Feb 2025 13:30	1
EV25020144-03	006	25 Feb 2025 09:42			27 Feb 2025 13:30	1
EV25020144-04	007	25 Feb 2025 09:55			27 Feb 2025 13:30	1
EV25020144-05	009	25 Feb 2025 10:05			27 Feb 2025 13:30	1
EV25020144-06	012A	25 Feb 2025 10:10			27 Feb 2025 13:30	1
EV25020144-07	P3S	25 Feb 2025 10:20			27 Feb 2025 13:30	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
WorkOrder: EV25020144

QC BATCH REPORT

Batch ID: 224932 (0) **Instrument: DX_144** **Method: TPH-DIESEL**

MBLK Sample ID: **MB-022825W** Units: **UG/L** Analysis Date: **03-Mar-2025 19:42**
Client ID: Run ID: **DX_144_508046** SeqNo: **8708676** PrepDate: **28-Feb-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH-Diesel Range	ND	130								
TPH-Oil Range	ND	250								
Surr: C25	*74.42*	*0*	*80*	*0*	*93.0*	*60 - 126*				

LCS Sample ID: **BS-022825W** Units: **UG/L** Analysis Date: **05-Mar-2025 10:32**
Client ID: Run ID: **DX_144_508046** SeqNo: **8708687** PrepDate: **28-Feb-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH-Diesel Range	820.4	130	1000	0	82.0	67 - 125.2				
Surr: C25	*98.52*	*0*	*80*	*0*	*123*	*60 - 126*				

LCSD Sample ID: **BSD-022825W** Units: **UG/L** Analysis Date: **03-Mar-2025 20:33**
Client ID: Run ID: **DX_144_508046** SeqNo: **8708678** PrepDate: **28-Feb-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH-Diesel Range	921.9	130	1000	0	92.2	67 - 125.2	820.4	11.6	15.2	
Surr: C25	*78.96*	*0*	*80*	*0*	*98.7*	*60 - 126*	*98.52*	*22*	*25*	

The following samples were analyzed in this batch:

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
WorkOrder: EV25020144

QC BATCH REPORT

Batch ID: R508036 (0) **Instrument:** Manual Entry II **Method:** TOTAL SUSPENDED SOLIDS BY SM2540D

MBLK Sample ID: **MBLK-R508036** Units: **MG/L** Analysis Date: **27-Feb-2025 13:30**
Client ID: Run ID: **Manual Entry II_508036** SeqNo: **8708369** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Suspended Solids	ND	5.0								

LCS Sample ID: **LCS-R508036** Units: **MG/L** Analysis Date: **27-Feb-2025 13:30**
Client ID: Run ID: **Manual Entry II_508036** SeqNo: **8708368** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Suspended Solids	92	5.0	100	0	92.0	85 - 115				

The following samples were analyzed in this batch:

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
WorkOrder: EV25020144

QC BATCH REPORT

Batch ID: 224804 (0) **Instrument: ICPMS_130** **Method: ICP/MS METALS ANALYSIS BY EPA-200.8**

MBLK Sample ID: **MB-022725W** Units: **UG/L** Analysis Date: **27-Feb-2025 15:52**
Client ID: Run ID: **ICPMS_130_507799** SeqNo: **8704000** PrepDate: **27-Feb-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	2.0								
Zinc	ND	2.5								

LCS Sample ID: **BS-022725W** Units: **UG/L** Analysis Date: **27-Feb-2025 15:57**
Client ID: Run ID: **ICPMS_130_507799** SeqNo: **8704001** PrepDate: **27-Feb-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	124.6	2.0	125	0	99.7	85.4 - 109				
Zinc	129.1	2.5	125	0	103	88.2 - 111				B

LCSD Sample ID: **BSD-022725W** Units: **UG/L** Analysis Date: **27-Feb-2025 15:59**
Client ID: Run ID: **ICPMS_130_507799** SeqNo: **8704002** PrepDate: **27-Feb-2025** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	125.6	2.0	125	0	100	85.4 - 109	124.6	0.818	10	
Zinc	129.6	2.5	125	0	104	88.2 - 111	129.1	0.435	10	B

The following samples were analyzed in this batch:

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Port of Everett
Project: MARINE TERMINAL
WorkOrder: **EV25020144**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

RIGHT SOLUTIONS | RIGHT PARTNER

Data Qualifiers

*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Work Order ID: EV25020144 **Date/Time Received:** **26-Feb-2025 10:17**

Client Name: POR02-EVERETT **Received by:** **Olivia Wyatt**

Completed By: */S/ Ariel Villa* (eSignature) 26-Feb-2025 10:19 (Date/Time) **Reviewed by:** (eSignature) (Date/Time)

Matrices: **Water** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	

Temperature(s)/Thermometer(s):	11.8 C, no ice	189
Cooler(s)/Kit(s):		
Date/Time sample(s) sent to storage:		

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV25020144

Date 2/26/2025 Page 1 Of 1

PROJECT ID: MARINE TERMINAL
REPORT TO COMPANY: PORT OF EVERETT
PROJECT MANAGER: JACOB KIRSCHNER
ADDRESS: 1205 CRAFTSMAN WAY SUITE 200
EVERETT, WA 98201
PHONE: 425-388-0268 P.O. #: PSA 2-2024-021
E-MAIL: JACOBK@PORTOFEVERETT.COM
INVOICE TO COMPANY: PORT OF EVERETT
ATTENTION: JACOB KIRSCHNER
ADDRESS: 1205 CRAFTSMAN WAY SUITE 200
EVERETT, WA 98201

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify) TOTAL METALS (ZN & CU)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	TSS							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. 001	2/25	9:25	WATER	1		X												X		X							3	
2. 002	2/25	9:30	WATER	2		X												X		X								
3. 006	2/25	9:42	WATER	3		X												X		X								
4. 007	2/25	9:55	WATER	4		X												X		X								
5. 009	2/25	10:05	WATER	5		X												X		X								
6. 012A	2/25	10:10	WATER	6		X												X		X								
7. P3S	2/25	10:20	WATER	7		X												X		X								
8.																												
9.																												
10.																												

ANALYSIS REQUESTED / OTHER (Specify)

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: TJ COLEBOURN, PORT OF EVERETT, 2/26/2025, 10:10
   Received By: [illegible] ALS, 2/26/25, 10:17
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | (5) | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: (5) Standard | 3 | 1 | SAME DAY

OTHER: Specify: _____

*Turnaround request less than standard may incur Rush Charges

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

SAMPLE RECEIVING CHECKLIST

Client: ~~Port of Everett~~ Port of Seattle * OW 2/26/26 Error

Project: Marine Terminal

ALS Job #: EV2502014

Login Date: 2/25/26

Login Time: 10:17

Login By: OW

Type of Shipping Container:
- [x] Cooler
- [ ] Box
- [ ] Other: _____

Shipped Via:
- [ ] FedEx Ground
- [ ] FedEx Express
- [ ] UPS
- [ ] External Courier
- [ ] ALS Courier
- [x] Hand Delivered

	Yes	No	N/A
Were custody seals on the outside of the shipping container? How Many? ____ Where? _____ Date: _____ Name: _____	☐	☐	☒
Was CoC filled out properly? (in ink, signed, dated, etc.)	☒	☐	☐
Did all bottles have labels?	☒	☐	☐
Did all bottle labels and tags agree with CoC?	☒	☐	☐
Were samples received within hold time?	☒	☐	☐
Did all bottles arrive in good condition?	☒	☐	☐
Was sufficient amount of sample sent for tests requested?	☒	☐	☐
Was correct preservation added to samples?	☒	☐	☐
Subcontract test containers added to subcontract bin?	☐	☐	☒
Wetchem test containers marked with applicable tests?	☐	☐	☒
Short hold time test containers delivered to analysts?	☐	☐	☒
VOA vials checked for bubbles? Bubbles in sample number(s): _____	☐	☐	☒
5035A kits received? Low kits: _____ High kits: _____	☐	☐	☒
5035A kits returned? Low kits: _____ High kits: _____	☐	☐	☒

Temperature upon receipt: 16.8 °C

On ice? ☐ Y ☒ N

Thermometer ID: 184

Other discrepancies:

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____
Outcome of call:

ALS Environmental – Everett
8620 Holly Dr. STE 100
Everett, WA 98012
(425) 356 - 2600

RIGHT SOLUTIONS | RIGHT PARTNER

Appendix H
Data Validation Report

DATA VALIDATION REPORT

PORT OF EVERETT
WEYERHAUSER MILL A SITE STORMWATERS

Prepared for:

GeoEngineers
17425 NE Union Hill Road, Suite 250
Redmond, WA 98052

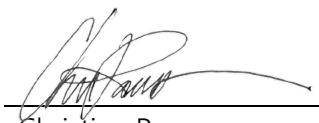
Prepared by:

EcoChem, Inc.
500 Union Street, Suite 1010
Seattle, Washington 98101

EcoChem Project: C2224-1

May 29, 2025

Approved for Release:



Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on stormwater and quality control sample data for the Port of Everett – Weyerhaeuser Mill A site. A complete list of samples is provided in the Sample Index.

Samples were analyzed by ALS Global, Everett, Washington. The analytical methods and EcoChem project chemists are noted below:

ANALYSIS	METHOD	PRIMARY REVIEW	SECONDARY REVIEW
Metals	EPA 200.8	I. Hooper	A. Bodkin
Diesel Range Organics	NWTPH-Dx		
Total Settleable Solids	SM2540D		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; the *Interim Action Work Plan, Weyerhaeuser Mill A Former Cleanup Site, Everett, Washington (*GeoEngineers June 14, 2024); *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA 2020); and *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2020).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R, the data are to be rejected and should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

No validation qualifiers were assigned to this data set.

Data qualifier definitions, reason codes, and validation criteria are included as APPENDIX A. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

Sample Index
Port of Everett - Weyerhaeuser Mill A Stormwaters

SDG	Sample ID	Laboratory ID	Total Metals	NWTPH-Dx	TSS
EV25020144	001	EV25020144-01	✓	✓	✓
EV25020144	002	EV25020144-02	✓	✓	✓
EV25020144	006	EV25020144-03	✓	✓	✓
EV25020144	007	EV25020144-04	✓	✓	✓
EV25020144	009	EV25020144-05	✓	✓	✓
EV25020144	012A	EV25020144-06	✓	✓	✓
EV25020144	P3S	EV25020144-07	✓	✓	✓

DATA VALIDATION REPORT
Port of Everett - Weyerhaeuser Mill A Stormwaters
Diesel Range and Motor Oil Range Organics by NWTPH-Dx

This report documents the review of analytical data from the analysis of stormwater samples and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Global, Everett, Washington. Refer to the Sample Index for a complete list of samples.

SDG	Number of Samples	Validation Level
EV25020144	7 Stormwater	Stage 2B

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes, and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs reported in the electronic data deliverable (EDD) were verified (100%) by comparing the EDD to the hardcopy laboratory data package. Sample results were also verified (10%).

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Sample Receipt, Preservation, and Holding Times	✓	Laboratory Control Samples (LCS/LCSD)
✓	GC/MS Instrument Performance (Tune)	1	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
✓	Initial Calibration (ICAL)	✓	Internal Standards
✓	Continuing Calibration (CCAL)	1	Field Duplicates
✓	Laboratory Blanks	✓	Target Analyte List
1	Field Blanks	✓	Reporting Limits
✓	Surrogate Compounds	✓	Reported Results

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.
1 Quality control outliers are discussed below, but no data were qualified.
2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C.

One sample cooler arrived at the laboratory at a temperature of 11.8°C. The samples were received at the laboratory on the day of collection; no qualifiers were assigned.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate samples (MS/MSD) were not analyzed. Laboratory accuracy and precision were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD percent recovery values and precision was acceptable as demonstrated by the LCS/LCSD relative percent difference values.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Port of Everett - Weyerhaeuser Mill A Stormwaters
Metals by Method 200.8

This report documents the review of analytical data from the analysis of stormwater samples and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Global, Everett, Washington. Refer to the Sample Index for a complete list of samples.

SDG	Number of Samples	Validation Level
EV25020144	7 Stormwater	Stage 2B

DATA PACKAGE COMPLETENESS

With the noted exceptions, the laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes, and all anomalies were discussed in the case narrative.

The PDF initially submitted by the laboratory did not contain summary forms for the ICP-MS tune associated with the calibration analyzed 2/27/25, the interference check standard summary forms, or the low-level continuing calibration summary forms. The laboratory was contacted and submitted the appropriate forms.

EDD TO HARDCOPY VERIFICATION

Sample results and related quality control data were received as an electronic data deliverable (EDD) and laboratory report. The EDD was verified against the laboratory report (10%).

TECHNICAL DATA VALIDATION

This report documents the review of analytical QC requirements as listed in the following table.

1	Sample Receipt, Preservation, & Holding Times	✓	Laboratory Control Samples (LCS/LCSD)
✓	ICP-MS Tune	✓	Matrix Spike/Matrix Spike Duplicate (MS/MSD)
✓	Initial Calibration	✓	Interference Check Samples
✓	Calibration Verification	✓	Internal Standards
✓	CRDL Standards	1	Field Duplicates
✓	Laboratory Blanks	✓	Reporting Limits
1	Field Blanks	✓	Reported Results

✓Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed
1 Quality control outliers are discussed below, but no data were qualified.
2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C.

One sample cooler arrived at the laboratory at a temperature of 11.8°C. The samples were received at the laboratory on the day of collection; no qualifiers were assigned.

Field Blanks

No field blanks were submitted.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) and matrix spike/matrix spike duplicate (MS/MSD) recoveries, and precision was acceptable as demonstrated by the LCS/LCSD and MS/MSD relative percent difference (RPD) values.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Port of Everett - Weyerhaeuser Mill A Stormwaters
TSS by Method SM2540D

This report documents the review of analytical data from the analysis of stormwater samples and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Global, Everett, Washington. Refer to the Sample Index for a complete list of samples.

SDG	Number of Samples	Validation Level
EV25020144	7 Stormwater	Stage 2B

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes, and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

Sample results and related quality control data were received as an electronic data deliverable (EDD) and laboratory report. The EDD was verified against the laboratory report (10%).

Samples were reported as not-detected at the reporting limit of 25 mg/L. The laboratory was requested to report down to the detection limit of 5 mg/L. A revised laboratory report was submitted and the EDD was corrected during validation.

TECHNICAL DATA VALIDATION

This report documents the review of analytical QC requirements as listed in the following table.

1	Sample Receipt, Preservation, and Holding Times	✓	Standard Reference Material
✓	Initial Calibration	1	Laboratory Replicates
✓	Calibration Verification	1	Field Duplicates
✓	Laboratory Blanks	✓	Reporting Limits
1	Field Blanks	1	Reported Results
✓	Laboratory Control Samples (LCS)		

✓ Method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.
1 Quality control results are discussed below, but no data were qualified.
2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C.

One sample cooler arrived at the laboratory at a temperature of 11.8°C. The samples were received at the laboratory on the day of collection; no qualifiers were assigned.

Field Blanks

No field blanks were submitted.

Laboratory Replicates

The laboratory duplicate was performed using a sample from an unrelated project. A summary form was not included in the PDF. The raw data was reviewed. Laboratory precision was acceptable.

Field Duplicates

No field duplicates were submitted.

Reported Results

The laboratory was asked to report the TSS results down to the method detection limit in order to meet the project target of 5 mg/L.

OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the laboratory control sample recovery and precision was also acceptable as demonstrated by the laboratory duplicate relative percent difference value.

All data, as reported, are acceptable for use.

ECOCHEM
Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS
REASON CODES
AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

Group	Code	Reason for Qualification
Sample Handling	1	Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times
Instrument Performance	24	Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass)
	5A	Initial Calibration (RF, %RSD, r^2)
	5B	Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L)[1] where appropriate
	5C	Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L)[1] where appropriate
Blank Contamination	6	Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.)
	7	Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L)[1] for negative instrument blanks
Precision and Accuracy	8	Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L)[1] where appropriate
	9A	Precision (Lab QC replicates: LCS/LCSD, MS/MSD, Lab Replicate)
	9B	Precision (Field QC replicates)
	10	Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L)[1] where appropriate
	12	Reference Material Use bias flags (H,L)[1] where appropriate
	13	Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L)[1] where appropriate
Interferences	16	ICP/ICP-MS Serial Dilution Percent Difference
	17	ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L)[1] where appropriate
	19	Internal Standard Performance (i.e., area, retention time, recovery)
	22	Elevated Detection Limit due to Interference (i.e., chemical and/or matrix)
	23	Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides)
Identification and Quantitation	2	Chromatographic pattern in sample does not match pattern of calibration standard
	3	2nd column confirmation (RPD or %D)
	4	Tentatively Identified Compound (TIC) (associated with NJ only)
	20	Calibration Range or Linear Range Exceeded
	25	Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.)
	27	Alkylated PAH compound not calibrated (C1-C4 homologs) - calculated using response from parent compounds
	28	Multiple PCB Aroclors reported in sample (overlapping patterns)
Miscellaneous	11	A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only)
	14	Other (See DV report for details)

[1] **H = high bias indicated**
L = low bias indicated

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

QC Element	Acceptance Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling				
Cooler Temperature & Preservation	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C	1	
Holding Time	Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction	J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X	1	Professional Judgement
Instrument Performance				
Initial Calibration	5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors ≤20%	Narrate if fewer than 5 calibration levels or if %R >15% J(+)/UJ(-) if r^2 <0.990 J(+)/UJ(-) if %RSD > 20%	5A	
Mid-range Calibration Check Std.	Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115%	Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R >115%	5B	
Blank Contamination				
Method Blank	At least one per batch (≤20 samples) No results >RL	U (at the RL) if sample result is < RL & < 5X blank result.	7	
		U (at reported sample value) if sample result is ≥ RL and < 5X blank result	7	
Field Blanks (if required by project)	No results > RL	Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned.	6	

Copyright 2006 EcoChem, Inc.

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

QC Element	Acceptance Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Precision and Accuracy				
MS samples (accuracy) (if required by project)	%R within lab control limits	Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked.	8	Use Professional Judgement if only one %R outlier
Precision: MS/MSD or LCS/LCSD or sample/dup	At least one set per batch (≤10 samples) RPD ≤ lab control limit	J(+) if RPD > lab control limits	9	
LCS (not required by method)	%R within lab control limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10%	10	Professional Judgement
Surrogates	2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150%	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R <10% No action if 2 or more surrogates are used, and only one is outside control limits.	13	Professional Judgement
Pattern Identification	Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match.	J(+)	2	
Field Duplicates	Use project control limits, if stated in QAPP **EcoChem default:** water: RPD < 35% solids: RPD < 50%	Narrate (Use Professional Judgement to qualify)	9	

Copyright 2006 EcoChem, Inc.

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range

(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx, June 1997, Wa DOE & Oregon DEQ)

QC Element	Acceptance Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Compound ID and Calculation				
Two analyses for one sample (dilution)	Report only one result per analyte	"DNR" (or client requested qualifier) all results that should not be reported.	11	See EcoChem TM-04

Copyright 2006 EcoChem, Inc.

Metals by ICP-MS
(Based on Inorganic NFG 2010 and SW-846 6020A)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling					
Cooler / Storage Temperature Preservation	**Solid:** Cooler temperature 4°C±2°C **Aqueous:** Nitric Acid to pH < 2 **Dissolved Metals:** 0.45 µm filter, preserve to pH < 2 after filtration	NFG (1) Method (2)	Cooler Temps: **If required by project** J (pos)/UJ (ND) if greater than 6° C Aqueous: J (pos)/UJ (ND) if pH > 2	1	Use **PJ** to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C (4) No quals for pH if samples preserved by lab immediately upon receipt and within 1 day of collection.
Holding Time	All matrices: 180 days from date sampled Frozen soils, sediments, tissues (-20°C) - HT extended to 1 year	NFG (1) Method (2) EcoChem standard policy	J (pos)/UJ (ND) if holding time exceeded	1	
Instrument Performance					
Tune	Analyzed prior to ICAL tunignsolution analyzed 5 times with Std. Dev. ≤ 5% Mass calibration < 0.1 amu difference from target mass Resolution < 0.9 amu @ 10% peak height	NFG (1) Method (2)	J(pos)/UJ(ND) if tune criteria not met	5A	Use **PJ** to evaluate tune. Alternate Resolution critteria may apply based on instrument specs (i.e <0.75 amu at 5% peak height)
Initial Calibration (ICAL)	Based on instrument requirements, blank + 1 standard minimum requirement for calibration If more than 1 standard used, r ≥ 0.995	NFG (1) Method (2)	J (pos)/UJ (ND) if r < 0.995	5A	
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R within ± 10% of true value	NFG (1) Method (2)	R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R >111%	5A (H,L)[3]	Qualify all samples in run
Reporting Limit (RL) Standard Low Level ICV/CCV	concentration at RL %R = 70%-130%	Method (2)	J (pos) < 2x RL / R (ND) if %R <50% J (pos) < 2x RL / UJ (ND) if %R 50 - 69% J (pos) < 2x RL if %R > 130%	5A (H,L)[3]	Qualify all samples in run

Copyright 2014 EcoChem, Inc.

Metals by ICP-MS
(Based on Inorganic NFG 2010 and SW-846 6020A)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
Instrument Performance cont'd					
Continuing Calibration Verification (CCV)	Immediately following ICV/ICB, then every two hours or ten samples, and at end of run. %R within ± 10% of true value	NFG (1) Method (2)	R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R >111%	5B (H,L)[3]	Qualify samples bracketed by CCV outliers
Interference Check Samples (ICSA / ICSAB)	ICSAB %R 80% - 120% for all spiked elements | ICSA | < MDL for all unspiked elements	NFG (1) Method (2)	For samples with Al, Ca, Fe, Mg > ICS levels: **ICSAB**: J(pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R = 50% - 79% J (pos) if %R > 120% **ICSA:** J (pos)< 2x ICSA/UJ (ND) for ICSA <Neg MDL J (pos) < 2x ICSA for ICSA > MDL	17 (H,L)[3]	Use **PJ** and molecular interferences to evaluate ICSA to determine if bias is present. Refer to **TM-14** for additional information.
Blank Contamination					
Method Blank (MB)	One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL	NFG (1) Method (2)	U (pos) if result is < 5X method blank concentration	7	Refer to **TM-02** for additional information. Blank Evaluation based on NFG 1994
Instrument Blanks (ICB/CCB)	After each ICV & CCV | blank concentration | < MDL	NFG (1) Method (2)	Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level	Pos Blks: 7 Neg Blks: 7L[3]	Use blanks bracketing samples for Qualification Refer to **TM-02** for additional information. **Hierarchy of blank review:** **#1 - Review MB, quaify as needed** **#2 - Review IB , qualify as needed** **#3 - Review FB , qualify as needed**
Field Blank (FB)	Blank conc < MDL	EcoChem standard policy	U (pos) if result is < 5x action level, as per analyte.	6	Qualify in associated field samples only. Refer to **TM-02** for additional information.

Copyright 2014 EcoChem, Inc.

Metals by ICP-MS
(Based on Inorganic NFG 2010 and SW-846 6020A)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
Precision and Accuracy					
Internal Standards (IS)	Added to all samples. All analytes must be associated with an internal standard 60-125% of cal blank IS	NFG [1] Method [2]	J(pos)/UJ(ND) all analytes associated with IS outlier	19	6020A criteria - IS >70% of ICAL std
LCS (recovery)	One per matrix per batch (of ≤ 20 samples); LCSD not required %R between 80-120%	Method [2]	J (pos)/R (ND) if %R <50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120%	10 (H,L)[3]	Qualify all samples in batch QAPP may have overriding accuracy limits. NFG Limits 70% -130%
LCS/LCSD (RPD)	LCSD not required, if analyzed: RPD ≤ 20%	Method [2]	J (pos)/UJ (ND) if RPD > 20%	9	Qualify all samples in batch QAPP may have overriding precision limits.
MS/MSD (recovery)	One per matrix per batch (of ≤ 20 samples); MSD not required %R between 75-125%	NFG [1] Method [2]	J (pos) if %R > 125% J (pos)/UJ (ND) if %R <75% J (pos)/R (ND) if %R < 30%, unless post digestion spike analyzed, J (pos)/UJ (ND) if post digestion spike %R OK	8 (H,L)[3]	No action if only one spike %R is outside criteria. NA if parent concentration >4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits.
Post Digestion Spikes	If MS is outside 75-125%, post-spike should be analyzed %R 80%-120% (method); 75%-125% (NFG)	NFG [1] Method [2]	Only used to support MS qualification decisions	NA	No qualifiers assigned based solely on this element.
MS/MSD (RPD)	MSD not required, if analyzed: RPD ≤ 20%	NFG [1] Method [2]	J (pos)/UJ (ND) if RPD > 20%	9	QAPP may have overriding precision limits.
Laboratory Duplicate	One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL	NFG [1] Method [2]	J (pos)/UJ (ND) if RPD > 20% or if difference > control limit	9	Qualify all samples in batch. QAPP may have overriding precision limits.

Copyright 2014 EcoChem, Inc.

Metals by ICP-MS
(Based on Inorganic NFG 2010 and SW-846 6020A)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
Precision and Accuracy cont'd					
Reference Material (RM, SRM, or CRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L)[3]	QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits
Serial Dilution	Analyze one sample per matrix at a 5x dilution %D <10% for original sample conc. > 50x MDL	NFG [(1)]	J(pos)/UJ(ND) if %D > 10% and native sample concentration > 50x MDL	16	Note serial dilutions for soil are reported in ug/L, but the MDL is in mg/kg. The units need to be adjusted. Qualify all samples in batch.
Field Duplicate	Solids: RPD <50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Narrate and qualify if required by project **(EcoChem PJ)** Qualify only field duplicate samples J(pos)/UJ(ND)	9	QAPP may have overriding precision limits.
Compound Quantitation					
Total and Dissolved Comparison	Total > Dissolved	EcoChem standard policy	J (pos)/UJ (ND) if Dissolved > Total and results fall outside of standard duplicate precision criteria	14	
Calibration Range	Results < instrument linear range	NFG [(1)] Method [(2)]	if result exceeds linear range and sample was not diluted J (pos)	20	
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	**TM-04** EcoChem Policy for Rejection/Selection Process for Multiple Results

[1] National Functional Guidelines for Inorganic Superfund Data Review, January 2010.
[2] Method SW846 6020A Inductively Coupled Plasma-Mass Spectrometry (ICP-MS), Revision 1, February 2007.
[3] "H" = high bias indicated; "L" = low bias indicated
[4] SW846, Chapter 3, Inorganic Analytes

(pos): Positive Result
(ND): Not detected

Copyright 2014 EcoChem, Inc.

Conventional Methods by Gravimetric Analysis
(i.e., Total Solids, Total Dissolved Solids, Total Suspended Solids, Grain Size)
(Based on Inorganic NFG 2010 and EPA methods)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling					
Cooler/Storage Temperature Preservation	Cooler temperature: 4°C±2°C Preservation: Analyte/Method Specific	Method [1] NFG[2]	J (pos)/UJ (ND) if preservation requirements not met	1	Use **PJ** to qualify for cooler temp outliers.
Holding Time	Analyte/Method Specific	Method NFG[2]	J (pos)/UJ (ND) if holding time exceeded	1	
Blank Contamination					
Method Blank (MB)	If required by method,one per matrix per batch of (of ≤ 20 samples) Blank conc < MDL	NFG [1] Method [2]	U (pos) if result is < 5X method blank concentration	7	Refer to **TM-02** for additional information. Blank Evaluation based on NFG 1994
Precision and Accuracy					
LCS (If appropriate to method)	One per matrix per batch (of ≤ 20 samples) %R between 80-120%	Method [2]	J (pos)/R (ND) if %R <50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120%	10 (H,L)[3]	Qualify all samples in batch QAPP may have overriding accuracy limits.
Reference Material (RM, SRM, or CRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L)[3]	QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits

Copyright 2014 EcoChem, Inc.

Conventional Methods by Gravimetric Analysis
(i.e., Total Solids, Total Dissolved Solids, Total Suspended Solids, Grain Size)
(Based on Inorganic NFG 2010 and EPA methods)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
Laboratory Duplicate	One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL	NFG [1] Method [2]	J (pos)/UJ (ND) if RPD > 20% For Grain Size, no action if results for fraction are less than 5%	9	Qualify all samples in batch, except Grain Size - qualify parent only. QAPP may have overriding precision limits.
Field Duplicate	Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Qualify only parent and field duplicate samples J (pos)/UJ (ND)	9	QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision.
Compound Quantitation					
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte per sample	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	

[1] National Functional Guidelines for Inorganic Superfund Data Review, January 2010.
[2] SW846 or EPA Standard Methods
[3] "H" = high bias indicated; "L" = low bias indicated

(pos): Positive Result
(ND): Not Detected

Copyright 2014 EcoChem, Inc.

Appendix I

Pre-Construction Stormwater Laboratory Report

Sample Collection Record Form

Site: Marine Terminals (WAR-001207)

Date: 9/27/2024

Weather Conditions: Rain

Date Analytical Results Submitted to Ecology: TBD

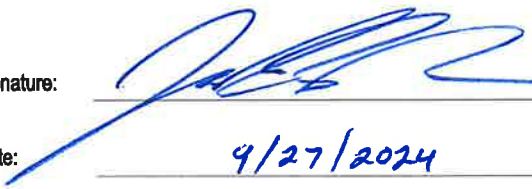
Sampling By: Jacob Kirschner

Date Samples Submitted to Laboratory for Analyses: 9/30/2024

Date of First Runoff Event After September 1 (First Fall Event): N/A

Sample Collection Location	Method of Sample Collection and Preservation	Sample Collection Time	Visual Sheen Present?	pH Field Measurement Reading	Turbidity Measurement Reading	Sample Collected Within First 12 Hours of Discharge Event? (or Explanation as to Why Not Possible)	Conditions that Could Affect Sampling
001 STSO	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*	9:25 AM	No	7.11	6.02	Yes	N/A
007	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*	9:35 AM	No	7.24	5.87	Yes	N/A
012A	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*	9:50 AM	No	7.34	11.2	Yes	N/A
P3S	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*	10:05 AM	No	7.48	7.6	Yes	N/A

* Standard Method and Handling Procedures - Standard methods for sample collection and preservation are outlined in detail within the "Sampling Methods and Handling Procedures" section of each facility's Storm Water Pollution Prevention Plan

Signature: 

Date: 9/27/2024

Sample Collection Record Form

Site: Marine Terminals (WAR-001207)

Date: 9/27/2024

Weather Conditions: Rain

Date Analytical Results Submitted to Ecology: TBD

Sampling By: Jacob Kirschner

Date Samples Submitted to Laboratory for Analyses: 9/30/2024

Date of First Runoff Event After September 1 (First Fall Event): N/A

Sample Collection Location	Method of Sample Collection and Preservation	Sample Collection Time	Visual Sheen Present?	pH Field Measurement Reading	Turbidity Measurement Reading	Sample Collected Within First 12 Hours of Discharge Event? (or Explanation as to Why Not Possible)	Conditions that Could Affect Sampling
009	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*	10:25 AM	No	Not Collected	Not Collected	Yes	N/A
	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*						
	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*						
	Grab Sample on Ice. Consistent with Standard Methods and Handling Procedures*						

* Standard Method and Handling Procedures - Standard methods for sample collection and preservation are outlined in detail within the "Sampling Methods and Handling Procedures" section of each facility's Storm Water Pollution Prevention Plan

Signature: [signature]

Date: 9/27/2024

October 7, 2024

Mr. Jacob Kirschner
Port of Everett
P.O. Box 538
Everett, WA 98206

Dear Mr. Kirschner,

On September 30th, 5 samples were received by our laboratory and assigned our laboratory project number EV24100002. The project was identified as your MARINE TERMINALS. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Carl Nott
Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Port of Everett P.O. Box 538 Everett, WA 98206	DATE: ALS JOB#: ALS SAMPLE#:	10/7/2024 EV24100002 EV24100002-01
CLIENT CONTACT:	Jacob Kirschner	DATE RECEIVED:	09/30/2024
CLIENT PROJECT:	MARINE TERMINALS	COLLECTION DATE:	9/27/2024 9:25:00 AM
CLIENT SAMPLE ID	001 STSO	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**0.50**	0.13	1	MG/L	10/05/2024	DHM
TPH-Oil Range	NWTPH-DX	**0.59**	0.25	1	MG/L	10/05/2024	DHM
Total Suspended Solids	SM2540D	U	25	1	MG/L	10/01/2024	MNC
Copper	EPA-200.8	**9.5**	2.0	1	UG/L	10/03/2024	EBS
Zinc	EPA-200.8	**83**	2.5	1	UG/L	10/03/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**98.4**	10/05/2024	DHM

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and an unidentified oil range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Port of Everett P.O. Box 538 Everett, WA 98206	DATE: ALS JOB#: ALS SAMPLE#:	10/7/2024 EV24100002 EV24100002-02
CLIENT CONTACT:	Jacob Kirschner	DATE RECEIVED:	09/30/2024
CLIENT PROJECT:	MARINE TERMINALS	COLLECTION DATE:	9/27/2024 9:35:00 AM
CLIENT SAMPLE ID	007	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**0.51**	0.13	1	MG/L	10/05/2024	DHM
TPH-Oil Range	NWTPH-DX	**0.60**	0.25	1	MG/L	10/05/2024	DHM
Total Suspended Solids	SM2540D	U	25	1	MG/L	10/01/2024	MNC
Copper	EPA-200.8	**9.7**	2.0	1	UG/L	10/03/2024	EBS
Zinc	EPA-200.8	**84**	2.5	1	UG/L	10/03/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**99.0**	10/05/2024	DHM

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and an unidentified oil range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Port of Everett P.O. Box 538 Everett, WA 98206	DATE: ALS JOB#: ALS SAMPLE#:	10/7/2024 EV24100002 EV24100002-03
CLIENT CONTACT:	Jacob Kirschner	DATE RECEIVED:	09/30/2024
CLIENT PROJECT:	MARINE TERMINALS	COLLECTION DATE:	9/27/2024 9:50:00 AM
CLIENT SAMPLE ID	012A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**1.1**	0.14	1	MG/L	10/05/2024	DHM
TPH-Oil Range	NWTPH-DX	**1.1**	0.25	1	MG/L	10/05/2024	DHM
Total Suspended Solids	SM2540D	U	25	1	MG/L	10/01/2024	MNC
Copper	EPA-200.8	**26**	2.0	1	UG/L	10/03/2024	EBS
Zinc	EPA-200.8	**97**	2.5	1	UG/L	10/03/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**94.3**	10/05/2024	DHM

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and an unidentified oil range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Port of Everett P.O. Box 538 Everett, WA 98206	DATE: ALS JOB#: ALS SAMPLE#:	10/7/2024 EV24100002 EV24100002-04
CLIENT CONTACT:	Jacob Kirschner	DATE RECEIVED:	09/30/2024
CLIENT PROJECT:	MARINE TERMINALS	COLLECTION DATE:	9/27/2024 10:05:00 AM
CLIENT SAMPLE ID	P3S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	**1.0**	0.15	1	MG/L	10/07/2024	DHM
TPH-Oil Range	NWTPH-DX	**0.94**	0.25	1	MG/L	10/07/2024	DHM
Total Suspended Solids	SM2540D	U	25	1	MG/L	10/01/2024	MNC
Copper	EPA-200.8	**12**	2.0	1	UG/L	10/03/2024	EBS
Zinc	EPA-200.8	**73**	2.5	1	UG/L	10/03/2024	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**107**	10/07/2024	DHM

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and an unidentified oil range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	Port of Everett P.O. Box 538 Everett, WA 98206	DATE: ALS JOB#: ALS SAMPLE#:	10/7/2024 EV24100002 EV24100002-05
CLIENT CONTACT:	Jacob Kirschner	DATE RECEIVED:	09/30/2024
CLIENT PROJECT:	MARINE TERMINALS	COLLECTION DATE:	9/27/2024 10:25:00 AM
CLIENT SAMPLE ID	009	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-200.8	**430**	2.5	1	UG/L	10/03/2024	EBS

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Port of Everett P.O. Box 538 Everett, WA 98206	DATE:	10/7/2024
		ALS SDG#:	EV24100002
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jacob Kirschner		
CLIENT PROJECT:	MARINE TERMINALS		

LABORATORY BLANK RESULTS

MB2-100324W - Batch 218583 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	MG/L	0.13	10/05/2024	DHM
TPH-Oil Range	NWTPH-DX	U	MG/L	0.25	10/05/2024	DHM

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R478969 - Batch R478969 - Water by SM2540D

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Suspended Solids	SM2540D	U	MG/L	25	10/01/2024	MNC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-100224W - Batch 218436 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Copper	EPA-200.8	U	UG/L	2.0	10/03/2024	EBS
Zinc	EPA-200.8	U	UG/L	2.5	10/03/2024	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Port of Everett P.O. Box 538 Everett, WA 98206	DATE:	10/7/2024
		ALS SDG#:	EV24100002
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Jacob Kirschner		
CLIENT PROJECT:	MARINE TERMINALS		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 218583 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**83.2**			67	125.2	10/05/2024	DHM
TPH-Diesel Range - BSD	NWTPH-DX	**91.1**	**9**		67	125.2	10/05/2024	DHM

ALS Test Batch ID: R478969 - Water by SM2540D

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Suspended Solids - BS	SM2540D	**96.0**			85	115	10/01/2024	MNC

ALS Test Batch ID: 218436 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Copper - BS	EPA-200.8	**101**			85.4	109	10/03/2024	EBS
Copper - BSD	EPA-200.8	**98.8**	**3**		85.4	109	10/03/2024	EBS
Zinc - BS	EPA-200.8	**97.8**			88.2	111	10/03/2024	EBS
Zinc - BSD	EPA-200.8	**101**	**3**		88.2	111	10/03/2024	EBS

APPROVED BY

Carl Nott
Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV24010002

Date 9/30/24 Page 1 Of 1

PROJECT ID:	Marine Terminals
REPORT TO COMPANY:	Port of Everett
PROJECT MANAGER:	Jacob Kirschner
ADDRESS:	1205 Craftsman Way STE 200 Everett, WA 98201
PHONE:	425-388-0268 P.O. #:
E-MAIL:	jacobk@portofeverett.com
INVOICE TO COMPANY:	Port of Everett
ATTENTION:	Jacob Kirschner
ADDRESS:	" " " "

ANALYSIS REQUESTED / OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify) Zn, (w)(Total)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	TSS	Metals - Zn (total)						NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. [redacted] 001 STSO	9/27/24	9:25AM	W	1		X												X		X								
2. 007	9/27/24	9:35AM	W	2		X												X		X								
3. 012A	9/27/24	9:50AM	W	3		X												X		X								
4. P3S	9/27/24	10:05AM	W	4		X												X		X								
5. 009	9/27/24	10:25AM	W	5																	X							
6.																												
7.																												
8.																												
9.																												
10.																												

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Jacob Kirschner, Port of Everett, 9/30/24 2:13PM
   Received By: ALS 9/30/24 1414
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: 3 day for TSS

*Turnaround request less than standard may incur Rush Charges

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

SAMPLE RECEIVING CHECKLIST

Client: Port of Everett

Project: Marine Terminals

ALS Job #: EV24010002

Login Date: 9/30/24

Login Time: 1414

Login By: AV

Type of Shipping Container:
- ☑ Cooler
- ☐ Box
- ☐ Other: _____

Shipped Via:
- ☐ FedEx Ground
- ☐ FedEx Express
- ☐ UPS
- ☐ External Courier
- ☐ ALS Courier
- ☑ Hand Delivered

	Yes	No	N/A
Were custody seals on the outside of the shipping container? How Many? ____ Where? ____ Date: ____ Name: ____			✓
Was CoC filled out properly? (in ink, signed, dated, etc.)	✓		
Did all bottles have labels?	✓		
Did all bottle labels and tags agree with CoC?	✓		
Were samples received within hold time?	✓		
Did all bottles arrive in good condition?	✓		
Was sufficient amount of sample sent for tests requested?	✓		
Was correct preservation added to samples?	✓		
Subcontract test containers added to subcontract bin?			✓
Wetchem test containers marked with applicable tests?	✓		
Short hold time test containers delivered to analysts?			✓
VOA vials checked for bubbles?			✓
Bubbles in sample number(s): _____			
5035A kits received? Low kits: ____ High kits: ____			✓
5035A kits returned? Low kits: ____ High kits: ____			✓

Temperature upon receipt: 15.6 °C

On ice? N

Thermometer ID: 189

Other discrepancies:

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call:

ALS Environmental – Everett
8620 Holly Dr. STE 100
Everett, WA 98012
(425) 356 - 2600